

Purchasing Week

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\$6 A YEAR U.S. AND CANADA \$25 A YEAR FOREIGN

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PROFESSIONAL PROSPECTIVE

Five Experts Will Bring Weekly Analysis Of Trends Behind Purchasing Week's Headlines



HAYES

Beginning this week (page 24), the five PURCHASING WEEK experts you see here are going to work for you on a regular, weekly basis:

• Hereafter in each issue one of them will comment and amplify on some topic with a high news priority.

• The topic itself will be determined by PURCHASING WEEK headlines. Thus, this week F. Albert Hayes tackles "How You Can Order Scientifically"—a headline in the Jan. 16 and 23 issues on the subject of Economic Order Value.

• The headline also automatically will select the commentator, thus:

F. Albert Hayes will deal with subjects involving purchasing methods, or-

(Turn to page 24, column 2)



KELLEY



PRERAU



LEIBOWITZ



OWEN

Truckers Eye Rate Hikes To Meet Teamster Gains

Chicago—Midwest truckers, who have just signed up with the Teamsters Union for a three-year wage and fringe-benefit package worth an estimated 42¢/hr., already are figuring how much of the cost must be passed on to their customers. But it will take weeks to estimate what additional revenues will be needed, if

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Standard Sizes Debated For Shipping Container

New York—Should shipping containers be standardized at 8 ft. x 8 ft. or 9 ft. x 9 ft.? That question plagued carriers, shippers, and other transportation industry representatives who assembled here for the first meeting of the new Bulk Packaging and Containerization Institute.

General complaint was that

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P/W PANORAMA

• **Lighting Is a Production Tool** and it's just as important to your operation as any piece of equipment in your plant or office. For an idea of how your facilities rate alongside recommended standards, see the spread on pages 14 and 15.

• **One Way to Solve Receiving Problems** is the method outlined in this week's session of 'School for Strategists.' If this is one of the thorns in your side, take a look at the games on page 23. You'll find them instructive—and fun, too.

• **Cars Won't Change Much Before 1965**, but there may be a drastic metamorphosis after that. 'Product Perspective' on page 19 takes up some of those possible developments, as outlined at the Society of Automotive Engineers Show.

• **Common Carriers, Leased Trucks or Private Fleets?** If shipping is one of your responsibilities, chances are that you've asked yourself this question. The story on page 12 discusses some of the pros and cons, and may help you to decide.

Sellers Scream About P.A. 'Brutality; Old Vendor-Buyer Bonds Loosening?

2-Ply Tires May Become Standard On '62 Compacts

Akron—Akron tiremakers believe that two-ply tires have passed their experimental tests and are soon to become standard equipment on compact cars—perhaps even before the '62 models appear.

General Tire and Rubber Co. said last week it had made its first shipments over and above those intended for strictly experimental use.

If fleet car buyers and other purchasers of current model compacts look closely, they may be surprised to learn their cars already are equipped with two-ply instead of the standard four-ply type of tire. All five original equipment tire manufacturers—General, Goodyear, Firestone, U.S. Rubber, and B. F. Goodrich—have been supplying automakers with the new tires for some time for test purposes.

In fact, industry sources esti-

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'Being Small-Ordered To Death' Is Lament Of Aluminum Distributors

Philadelphia — The abnormal increase in small orders for aluminum products is a source of both aggravation and encouragement to aluminum distributors. This paradox provided the major theme at the annual meeting of the National Assn. of Aluminum Distributors (NAAD) here last week.

On the bright side, the large number of small orders was hailed as a sign that inventory piling had run its course.

On the other hand, the increase in small order purchasing is pinching profits for aluminum service centers—because small orders mean higher unit processing cost.

"We're being short-ordered to death," said Lester E. Brian, Jr., executive vice-president of Peter A. Frasse & Company, summing up for East Coast distributors. "It's boosting our

(Turn to page 25, column 4)

Plant Maintenance Show

Chicago—P.A.'s will have to revise many of their traditional MRO buying practices if they want to keep up with the host of new products designed to keep the plant in topnotch shape.

That's the word that emerged from the 12th annual Plant Maintenance & Engineering Show held here last week, which highlighted

(Turn to page 23, column 3)



H. F. HOFFMEISTER

Revolution in Purchasing Brings Vice Presidency To Missouri Pacific P.A.

St. Louis—The Missouri Pacific Railroad has just handed its chief purchasing agent, Harold M. Hoffmeister, a vice presidency. In his new job Hoffmeister, who until three years ago was assistant to the road's chief mechanical officer, will have full command of not only MoPac's purchasing department but also its rapidly expanding electronic data processing and methods and procedures program.

Here's why: Since 1958 Hoffmeister's application of engineering principles to purchasing has completely revolutionized the Missouri Pacific's purchasing control policies. His department achieved nearly a \$4-million reduction in inventory and effected savings that are running at the rate of \$250,000 a year and may double in three years.

Until he was asked in Feb-

(Turn to page 26, column 1)

P.A.'s Now Insist On Smaller Orders, Better Service, and Expediting

New York—"You can't exactly say P.A.'s have torn the pages on vendor relations and buying procedures out of their purchasing manuals. But they've sure made some whip-cracking revisions—and it hurts."

That's how one major chemical company's sales chief sums up call reports from his harried salesmen. Some of these fellows (P.A.'s), he said, are really "brutal."

What this outspoken sales executive means is that purchasing men, on the spot just as much as sales to help jack up business profits, are getting tougher and tougher in their requirements for speedier deliveries of small orders, sharper shaving of prices, better quality, and all the other factors that are required to keep production lines operating in a low inventory, tight profit situation.

Here are some examples of how purchasing men throughout the country are making their vendors toe the line:

• A group of Ohio purchasing agents met earlier this month to discuss a united-front program aimed at shifting more of the burden of expediting orders to suppliers and their sales representatives.

• A St. Louis purchasing director for an electrical products company advises that the best way to get "special just-for-you" price cuts is to announce to regular suppliers that you are asking for bids across the board. He

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This Week's

Purchasing Perspective

JAN. 30—
FEB. 5

The speed with which the hours-old Kennedy Administration moved in on New York's harbor and rail freight strike tieup last week gave a strong hint of how it intends to deal with critical labor-management disputes.

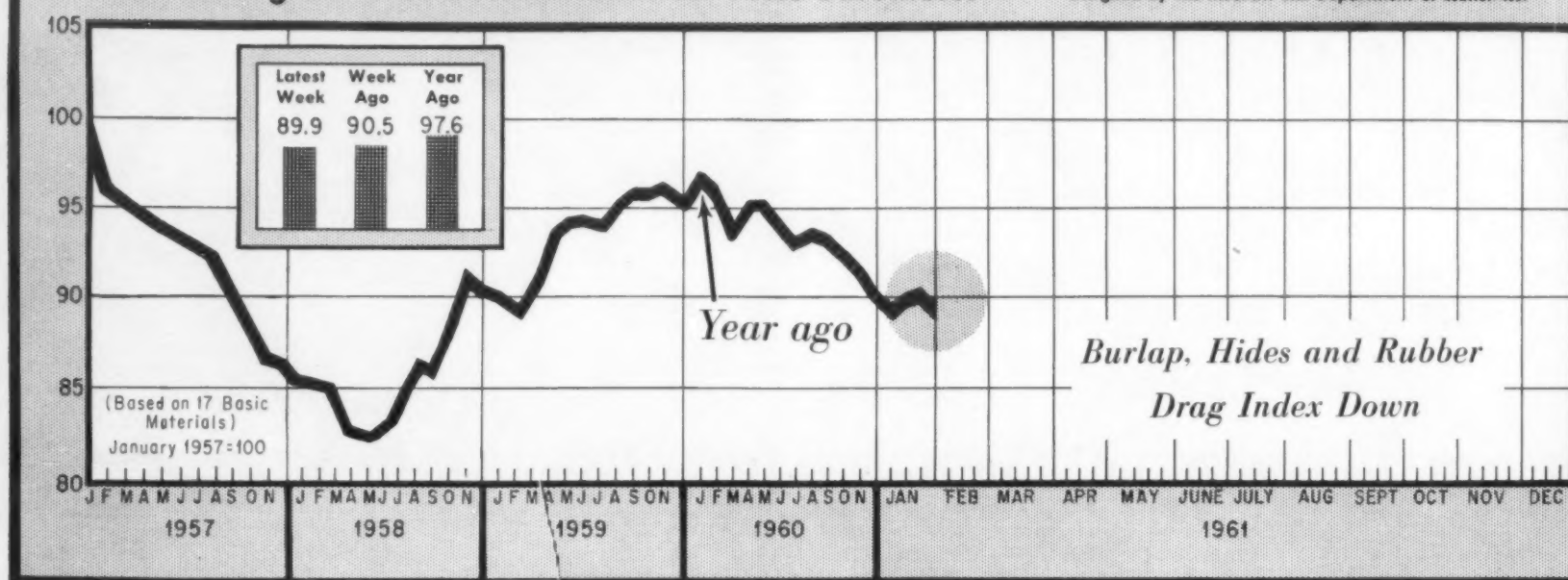
Federal mediators, along with top state and local officials, had been working round-the-clock to end the two-week walkout. But it was Labor Secy. Arthur Goldberg, the AFL-CIO's former general counsel and long-time chief negotiator—in fact, if not in name—for the United Steelworkers, who finally rode shotgun for the new Administration. Goldberg stepped into the New York dispute within minutes after being sworn in as a cabinet member, and over a weekend helped effect agreement on a compromise solution to a work-rules deadlock that had all but shut down the entire New York Central Railroad through secondary picketing.

"This doesn't mean we'll get into every little labor dispute," Goldberg said later, "but this one was of national magnitude." He added: "A good labor lawyer (which the Labor Secretary

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Purchasing Week Industrial Materials Price Barometer

This index, based on 17 basic materials, was especially designed by the McGraw-Hill Department of Economics.



This Week's Commodity Prices

| | Jan. 25 | Jan. 18 | Year Ago | % Yrly Change |
|--|---------|---------|----------|---------------|
| METALS | | | | |
| Pig iron, Bessemer Pitts., gross ton..... | 67.00 | 67.00 | 67.00 | 0 |
| Pig iron, basic, valley, gross ton..... | 66.00 | 66.00 | 66.00 | 0 |
| Steel, billets, Pitts., net ton..... | 80.00 | 80.00 | 80.00 | 0 |
| Steel, structural shapes, Pitts., cwt..... | 5.50 | 5.50 | 5.50 | 0 |
| Steel, structural shapes, Los Angeles, cwt..... | 6.20 | 6.20 | 6.20 | 0 |
| Steel, bars, del., Phila., cwt..... | 5.97 | 5.97 | 5.975 | -.1 |
| Steel, bars, Pitts., cwt..... | 5.675 | 5.675 | 5.675 | 0 |
| Steel, plates, Chicago, cwt..... | 5.30 | 5.30 | 5.30 | 0 |
| Steel scrap, #1 heavy, del. Pitts., gross ton..... | 30.00 | 30.00 | 43.00 | -30.2 |
| Steel scrap, #1 heavy, del. Cleve., gross ton..... | 29.00 | 29.00 | 43.00 | -32.6 |
| Steel scrap, #1 heavy, del. Chicago, gross ton..... | 30.00 | 30.00 | 42.00 | -29.6 |
| Aluminum, pig, lb..... | .26 | .26 | .26 | 0 |
| Secondary aluminum, #380 lb..... | .23 | .23 | .25 | -8.0 |
| Copper, electrolytic, wire bars, refinery, lb..... | .286 | .286 | .338 | -15.4 |
| Copper scrap, #2, smelters price, lb..... | .225 | .225 | .268 | -16.0 |
| Lead, common, N.Y., lb..... | .11 | .11 | .12 | -8.3 |
| Nickel, electrolytic, producers, lb..... | .74 | .74 | .74 | 0 |
| Tin, Straits, N.Y., lb..... | 1.004 | 1.008 | 1.00 | +.4 |
| Zinc, Prime West, East St. Louis, lb..... | .115 | .115 | .13 | -11.5 |
| FUELS† | | | | |
| Fuel oil #6 or Bunker C, Gulf, bbl..... | 2.30 | 2.30 | 2.00 | +15.0 |
| Fuel oil #6 or Bunker C, N.Y., barge, bbl..... | 2.62 | 2.62 | 2.37 | +10.5 |
| Heavy fuel, PS 400, Los Angeles, rack, bbl..... | 2.10 | 2.05 | 2.15 | -2.3 |
| Lp-Gas, Propane, Okla., tank cars, gal..... | .045 | .045 | .05 | -10.0 |
| Gasoline, 92 oct. reg., Chicago, tank car, gal..... | .126 | .126 | .111 | +13.5 |
| Gasoline, 84 oct. reg., Los Angeles, rack, gal..... | .11 | .11 | .107 | +2.8 |
| Kerosene, Gulf, Cargoes, gal..... | .098 | .098 | .095 | +3.2 |
| Heating oil #2, Chicago, bulk, gal..... | .098 | .098 | .096 | +2.1 |
| CHEMICALS | | | | |
| Ammonia, anhydros, refrigeration, tanks, ton..... | 94.50 | 94.50 | 90.50 | +4.4 |
| Benzene, petroleum, tanks, Houston, gal..... | .34 | .34 | .34 | 0 |
| Caustic soda, 76% solid, drums, carlots, cwt..... | 4.80 | 4.80 | 4.80 | 0 |
| Coconut oil, inedible, crude, tanks, N.Y. lb..... | .139 | .135 | .198 | -29.8 |
| Glycerine, synthetic, tanks, lb..... | .273 | .273 | .293 | -6.8 |
| Linseed oil, raw, in drums, carlots, lb..... | .162 | .162 | .176 | -8.0 |
| Phthalic anhydride, tanks, lb..... | .195 | .195 | .165 | +18.2 |
| Polyethylene resin, high pressure molding, carlots, lb..... | .275 | .275 | .325 | -15.4 |
| Rosin, W.G. grade, carlots, fob N.Y. cwt..... | 17.50 | 17.50 | 13.70 | +27.7 |
| Shellac, T.N., N.Y. lb..... | .31 | .31 | .31 | 0 |
| Soda ash, 58%, light, carlots, cwt..... | 1.55 | 1.55 | 1.55 | 0 |
| Sulfur, crude, bulk, long ton..... | 23.50 | 23.50 | 23.50 | 0 |
| Sulfuric acid, 66° commercial, tanks, ton..... | 22.35 | 22.35 | 22.35 | 0 |
| Tallow, inedible, fancy, tank cars, N.Y. lb..... | .066 | .064 | .055 | +20.0 |
| Titanium dioxide, anatase, reg. carlots, lb..... | .255 | .255 | .255 | 0 |
| PAPER | | | | |
| Book paper, A grade, Eng. finish, Untrimmed, carlots, cwt..... | 17.75 | 17.75 | 17.20 | +3.2 |
| Bond paper, #1 sulfite, water marked, 20 lb, carton lots, cwt..... | 25.20 | 25.20 | 25.20 | 0 |
| Chipboard, del. N.Y., carlots, ton..... | 100.00 | 100.00 | 100.00 | 0 |
| Wrapping paper, std. Kraft, basis wt. 50 lb rolls..... | 9.50 | 9.50 | 9.25 | +2.7 |
| Gummed sealing tape, #2, 60 lb basis, 600 ft. bundle..... | 6.60 | 6.60 | 6.30 | +4.8 |
| Old corrugated boxes, dealers, Chicago, ton..... | 13.00 | 13.00 | 19.00 | -31.6 |
| BUILDING MATERIALS† | | | | |
| Cement, Portland, bulk carlots, fob New Orleans, bbl..... | 3.65 | 3.65 | 3.65 | 0 |
| Cement, Portland, bulk carlots, fob N.Y., bbl..... | 4.20 | 4.20 | 4.18 | +.5 |
| Southern pine, 2x4, s4s, trucklots, fob N.Y., mftbm..... | 116.00 | 116.00 | 125.00 | -7.2 |
| Douglas fir, 2x4, s4s, carlots, fob Chicago, mftbm..... | 123.00 | 124.00 | 138.00 | -10.9 |
| Spruce, 2x4, s4s, carlots, fob Toronto, mftbm..... | 82.00 | 82.00 | 95.00 | -13.7 |
| Fir plywood, 1/4" AD, 4x8, dealer, crid, fob mill, msf..... | 60.00 | 60.00 | 68.00 | -11.8 |
| TEXTILES | | | | |
| Burlap, 10 oz. 40", N.Y., yd..... | .154 | .157 | .104 | +48.1 |
| Cotton middling, 1", N.Y., lb..... | .323 | .323 | .331 | -2.4 |
| Printcloth, 39", 80x80, N.Y., spot, yd..... | .175 | .175 | .230 | -23.9 |
| Rayon twill, 40 1/2", 92x62, N.Y., yd..... | .21 | .21 | .235 | -10.6 |
| Wool tops, N.Y., lb..... | 1.493 | 1.502 | 1.57 | -4.9 |
| HIDES AND RUBBER | | | | |
| Hides, cow, light native, packers, Chicago, lb..... | .155 | .165 | .235 | -34.0 |
| Rubber, #1 std ribbed smoked sheets, N.Y., lb..... | .282 | .285 | .402 | -29.9 |

† Source: Petroleum Week † Source: Engineering News-Record

This Week's

Price Perspective

JANUARY 30-FEBRUARY 5

PRICE EROSION—Gloomy steel outlook (mill operations in February now apparently will remain around the 50% of capacity level) continues to have a slow eroding effect on the entire steel price structure.

In the past few weeks, reductions have been posted on certain types in different areas. Spot examples of these include: Type 422 stainless—a flat 10%; electric weld steel pipe, \$20/ton; warehouse hot-rolled steel, as much as \$2/ton.

Steel experts see no letup in the "chipping away" process if demand continues to sag. In fact, some analysts now even doubt the likelihood of a general price boost come next October when another 13¢/hr. wage boost is scheduled to go into effect.

If the industry passes this one up, it would mean the mills will have had to absorb a total of 39¢/hr. in wage hikes since the last price increase (mid-1958). The 39¢ is the sum of a 13¢ boost in January, 1960, in the form of fringe benefits; the recent 13¢ increase of December, 1960; and 13¢ scheduled for the coming fall.

Such absorption would have been unthinkable a few years ago when buyers were practically conditioned for automatic yearly increases in steel prices.

FOREIGN COMPETITION may also be a factor in making the mills think twice before posting any general increase.

Just last week, for example, Japan announced a \$5-\$10 cut in sheet prices—the latest in a series of steel product reductions by that nation. This still leaves Japanese sheet prices above ours—but by a much smaller margin.

Moreover, the new move could cut into our sheet exports to some parts of the world—particularly where Japan has the freight cost edge.

Meanwhile, West Coast producers continue to complain of foreign inroads in such items as nails, wire products, and electrical conduit. In another item—galvanized continuous weld pipe—overseas producers are underselling domestic mills by as much as 20%.

The re-entry of Belgium into the export market (after the recent long general strike) could be still another factor in keeping a lid on tags. Belgium is the leading source of imported steel for the United States.

CHEAPER BORROWING—Two recent financial developments—one foreign, and one domestic—point to the possibility of less costly business loans.

• **Foreign**—Germany has reduced its discount rate from 4% to 3 1/2%—the second cut in three months. It's all part of a general European trend, coming closely on the heels of similar cuts by England and France.

It's significant because lower foreign rates give the U. S. more leeway to reduce charges here—without fear of precipitating a gold outflow.

• **Domestic**—Nonbank rates are again dropping. Last week, sales finance companies dropped rates by as much as 1/2% on commercial paper. In another move commercial paper dealers pared 1/8% off rates of business notes sold on the open market.

If the trend continues, it could force banks to lower their posted rates.

TRANSPORTATION PRESSURE: The rising cost of freight is putting growing pressure on a number of concerns to boost prices.

Coal, for example, may be slightly higher to some buyers because of higher rail rates. In glass containers, rising transportation costs, piling up on higher labor costs, could bring the first price rise in over three years. And in one chemical, Boron, quotes went up last week to reflect higher freight rates.

If business should improve later this year, a lot more firms might be tempted to pass through hikes which they are now being forced to absorb.

Dow Chemical 'Reluctantly' Abandons Attempt to Raise Polystyrene Prices

New York—Dow Chemical Co. last week "reluctantly" removed its 19¢/lb. all-customer price on general purpose polystyrene. Its new price, 18¢, was aimed at matching the industry level.

Dow made the move on the heels of a new price schedule from Monsanto Chemical Co. aimed at "simplifying" its polystyrene price structure.

Polystyrene Steadied

This seemed to end, temporarily at least, a game of roulette with polystyrene prices that had seen drops from 21½¢ to 18¢ since November. Dow had tried to give the wheel another spin last month with an increase to 19¢.

The Dow price of 18¢ did not call for a premium on smaller shipments, which was a feature of the new Monsanto schedule. Monsanto's prices on under-20,000 lb. shipments were: 18½¢/lb. for 5,000-19,999 lb. and 19½¢/lb. for under 5,000 lb. However, the schedule increased the bulk hopper-car discount to 1¼¢/lb., making the price of polystyrene 16¾¢/lb. for 100,000-lb. shipments and over. Dow quotes the same discount.

Other Key Points

Other key points in the new Monsanto schedule:

- Special price "frills" were removed to make the basic price schedule clearer to customers. The direct-shipment option discount of ¼¢/lb. was eliminated. The premium carton charge (½¢/lb. for 1,000-lb. containers) was removed. Dow had previously eliminated these extras.

- A "volume color policy" was restored to enable Monsanto to compete more evenly item-for-item with Dow's VIP (volume

Low Price of Rubber Forces GSA to Stop Sales From Stockpile

Washington—General Services Administration (GSA) has suspended sales of rubber from the government's stockpile because of depressed prices.

Under a long-term plan to dispose of 470,000 long tons of surplus rubber, a sliding scale on amounts to be sold was tied directly to market price. The cut-off point of GSA sales was placed at 30¢/lb. on the market. When the rubber price fell below that figure, GSA stopped disposing of its surplus stocks.

Since the long-term disposal plan was adopted in the fall of 1959, GSA has sold off about 89,000 tons of rubber. When the sales began, the rubber prices ranged between 35¢ and 36¢/lb., and have fluctuated in the intervening period. As the price declined, the volume of surplus sales was progressively limited because the agency has an obligation under law to avoid disruption of the market in surplus disposal operations.

Since embarking on the long-term disposal plan, GSA has purchased no rubber for its stockpile, the total amount of which is classified.

inventory production). This calls for lower prices for colors ordered from large available stocks.

Both Dow and Monsanto quote 2¢/lb. lower prices on colors ordered from volume stocks than the off-the-shelf prices for these colors in each category.

Other companies producing polystyrene said they would meet the new schedules wherever practical.

Supreme Court Backs FPC in Natural Gas Case

Washington — The U. S. Supreme Court ruled last week that the Federal Power Commission can block the direct sale of natural gas to an industrial customer if the FPC believes the use proposed for the gas is wasteful or the price inflationary.

Both issues were drawn in a case in which Consolidated Edison Co. wanted to pay Transcontinental Gas Pipe Line Corp. a transportation fee to carry Texas gas to New York to be used in generation of electricity. The commission had appealed to the

Supreme Court after a U.S. circuit court ruled against the FPC denial of a permit to Consolidated Edison.

For years the FPC has been concerned over sales of natural gas for uses considered wasteful depleting of a natural resource.

Although the court handed the commission broader authority, future cases with fuller records will determine what tests will be used to decide if a price is inflationary, or if a proposed use is unnecessarily wasteful.

One project recently put before

the commission may hinge on the FPC's new authority. It is Tennessee Gas Transmission Co.'s plan for a \$225-million pipeline system linking south Texas and the Los Angeles area via Mexico.

The pipeline would be used to carry gas bought by Southern California Edison Co. from Humble Oil & Refining Co. to fire its steam generating plants in the Los Angeles area. Both the price and the end-use issues are involved in the pipeline project, and both are expected to be fully argued before the commission.



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Washington Perspective

JAN. 30—
FEB. 5

Per-unit costs and profits of separate divisions of big companies are vital to monopoly investigations. So said a federal judge in New York in ordering General Motors to hand over to a grand jury internal financial reports of its Electromotive Div.

Justice Dept. attorneys consider the court order a significant victory in a continuing grand jury inquiry into the make-up of General Motors. The company has consistently resisted talking about division-by-division operations, contending much information is not relevant.

The judge agreed with the Justice Dept. that such information not only is relevant but actually is essential to an antitrust investigation. The order could have far-reaching effects on subsequent antitrust cases.

Data to be turned over to the grand jury by GM's Electromotive Div. include per-unit costs and profits, division costs and profits (anticipated as well as past), return on investment, planned capital expenditures, and the division's method of allocating costs from the corporation.

The recent liberalization of rules governing residual fuel oil imports on the East Coast will be scrutinized by the Kennedy Administration.

In one of his last acts, outgoing President Eisenhower made changes in the rules sought by the Interior Dept. to let new importers enter the program and to make the distribution of residual quotas among present importers more equitable.

The new Interior Secy., Stewart L. Udall, said all "eleventh hour" decisions of the Eisenhower Administration will be reviewed.

He said the reappraisals will be without prejudice, and commented, "We just don't want anybody making decisions for our Administration as they go out the door."

Evidence of the conflicts problem presented by oil imports has been the delay in naming an Assistant Secretary for Minerals, the aide who will be most directly concerned with oil imports. The post was the last top spot in the Interior Department unfilled, and Udall said he was looking for an appointee with insight into oil problems.

Before the residual oil import rules were changed by Eisenhower, only companies with residual imports in 1957 were given quotas. Under the changed rules, companies with deep water terminal facilities will be given quotas, as well as those with 1957 import records.

The Defense Dept. seems to be getting full value for its billion-dollar annual outlay for oil products. So say Justice Dept. investigators, who make periodic checks of military purchases for signs of anti-competitive practices.

After a year-long study, Justice found that the Military Petroleum Supply Agency—which buys oil products for all the services—has developed effective procedures to encourage competitive bidding and to ensure small business a fair share of military contracts. MPSA has had this job for four years.

The study found no indications of rigged bidding or collusion to share markets.

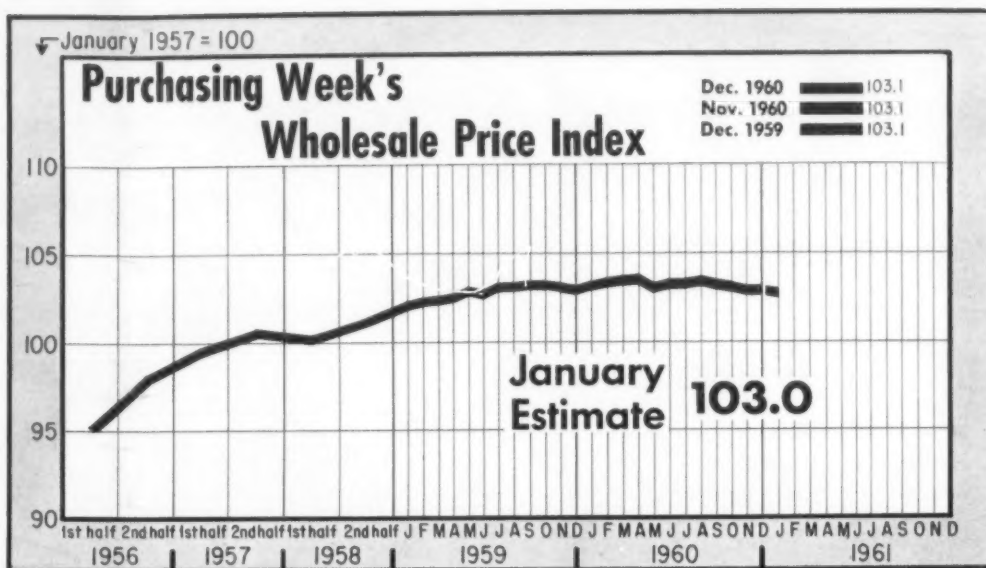
President Kennedy's chief adviser on transportation policy—Clarence D. Martin Jr.—has a varied business background but little experience in transportation operations.

Martin, 44, is a Los Angeles auto dealer with interests in real estate, financing, and ranches. He was Southern California campaign manager for Kennedy, is the son of a former governor of Washington and a close friend of Sen. Henry M. Jackson (D-Wash.) and Gov. Edmund Brown of California.

Weekly Production Records

| | Latest Week | Week Ago | Year Ago |
|--|-------------|----------|----------|
| Steel ingot, thous tons | 1,499 | 1,482* | 2,727 |
| Autos, units | 96,436 | 110,808* | 175,060 |
| Trucks, units | 18,441 | 20,256* | 31,859 |
| Crude runs, thous bbl, daily aver | 8,357 | 8,342 | 8,227 |
| Distillate fuel oil, thous bbl | 14,819 | 14,542 | 13,644 |
| Residual fuel oil, thous bbl | 6,306 | 6,584 | 6,596 |
| Gasoline, thous bbl | 28,902 | 29,158 | 28,753 |
| Petroleum refineries operating rate, % | 84.3 | 84.1 | 84.6 |
| Container board, tons | 154,267 | 153,761 | 166,404 |
| Boxboard, tons | 101,595 | 96,120 | 100,878 |
| Paper operating rate, % | 90.6 | 81.3* | 97.4 |
| Lumber, thous of board ft | 177,731 | 143,629 | 242,075 |
| Bituminous coal, daily aver thous tons | 1,331 | 1,366* | 1,471 |
| Electric power, million kilowatt hours | 14,817 | 14,684 | 14,523 |
| Eng const awards, mil \$ Eng News-Rec | 269.2 | 259.8 | 245.2 |

* Revised



OVER-ALL STABILITY HIDES some important up and down movements in industrial prices. Sharp 2% declines were reported last month in bearings, tires and nonferrous mill shapes—with the latter scheduled for further dips this month in line with new

copper and zinc cuts. Textiles continued their mild easing with another 1/2% decline in both cotton and man-made varieties. But offsetting these weaknesses were substantial boosts in bolts and nuts (5%), leather (2 1/2%), motor trucks (1%), paint (1%).

This Month's Industrial Wholesale Price Index

| Item | Latest Month | Month Ago | Year Ago | % Yrly Change |
|--|--------------|-----------|----------|---------------|
| Cotton Broadwoven Goods | 98.4 | 99.0 | 104.8 | - 6.1 |
| Manmade Fiber Textiles | 94.8 | 95.2 | 99.0 | - 4.2 |
| Leather | 112.7 | 110.1 | 117.4 | - 4.0 |
| Gasoline | 99.4 | 99.4 | 90.3 | +10.1 |
| Residual Fuel Oils | 82.6 | 82.6 | 73.2 | +12.8 |
| Raw Stock Lubricating Oils | 111.0 | 111.0 | 104.5 | + 6.2 |
| Inorganic Chemicals | 103.5 | 103.5 | 102.4 | + 1.1 |
| Organic Chemicals | 98.2 | 98.0 | 99.4 | - 1.2 |
| Prepared Paint | 104.5 | 103.5 | 103.4 | + 1.1 |
| Tires & Tubes | 93.1 | 95.0 | 89.6 | - 6.5 |
| Rubber Belts & Belting | 108.7 | 108.7 | 105.6 | + 2.9 |
| Lumber Millwork | 105.4 | 105.5 | 107.1 | - 1.6 |
| Paperboard | 97.2 | 97.2 | 99.8 | - 2.6 |
| Paper Boxes & Shipping Containers | 105.2 | 105.2 | 101.9 | + 3.2 |
| Paper Office Supplies | 103.2 | 103.2 | 101.9 | + 1.3 |
| Finished Steel Products | 108.8 | 108.8 | 109.2 | - .4 |
| Foundry & Forge Shop Products | 108.3 | 108.3 | 106.8 | + 1.4 |
| Non Ferrous Mill Shapes | 96.3 | 98.3 | 98.4 | - 2.1 |
| Wire & Cable | 86.9 | 87.1 | 95.4 | - 8.9 |
| Metal Containers | 104.1 | 104.1 | 103.7 | + .4 |
| Hand Tools | 112.7 | 112.7 | 110.4 | + 2.1 |
| Boilers, Tanks & Sheet Metal Products | 101.4 | 101.4 | 102.4 | - 1.0 |
| Bolts, Nuts, etc. | 112.1 | 106.3 | 108.6 | + 3.2 |
| Power Driven Hand Tools | 108.9 | 108.4 | 107.8 | + 1.0 |
| Small Cutting Tools | 118.5 | 118.5 | 114.9 | + 3.1 |
| Precision Measuring Tools | 109.5 | 109.5 | 109.3 | + .2 |
| Pumps & Compressors | 112.4 | 112.4 | 111.9 | + .5 |
| Industrial Furnaces & Ovens | 122.6 | 122.5 | 121.2 | + 1.2 |
| Industrial Material Handling Equipment | 107.6 | 107.6 | 107.0 | + .6 |
| Industrial Scales | 115.7 | 115.7 | 115.2 | + .4 |
| Fans & Blowers | 105.1 | 105.1 | 104.3 | + .8 |
| Office & Store Machines & Equipment | 105.5 | 105.5 | 105.0 | + .5 |
| Internal Combustion Engines | 104.4 | 104.4 | 103.2 | + 1.2 |
| Integrating & Measuring Instruments | 121.3 | 121.3 | 118.1 | + 2.7 |
| Motors & Generators | 100.5 | 100.5 | 103.2 | - 2.6 |
| Transformers & Power Regulators | 96.6 | 96.6 | 100.1 | - 3.5 |
| Switch Gear & Switchboard Equipment | 104.6 | 104.6 | 108.3 | - 3.4 |
| Arc Welding Equipment | 109.1 | 109.1 | 103.5 | + 5.4 |
| Incandescent Lamps | 130.9 | 130.9 | 130.9 | 0 |
| Motor Trucks | 105.4 | 104.4 | 106.2 | - .8 |
| Commercial Furniture | 106.9 | 106.9 | 105.8 | + 1.0 |
| Glass Containers | 101.3 | 101.3 | 106.3 | - 4.7 |
| Flat Glass | 97.6 | 97.6 | 99.7 | - 2.1 |
| Concrete Products | 104.3 | 104.3 | 103.8 | + .5 |
| Structural Clay Products | 107.8 | 107.8 | 106.7 | + 1.0 |
| Gypsum Products | 104.7 | 104.7 | 104.7 | 0 |
| Abrasive Grinding Wheels | 94.8 | 94.8 | 94.8 | 0 |
| Industrial Valves | 114.1 | 114.1 | 116.6 | - 2.1 |
| Industrial Fittings | 89.9 | 89.9 | 106.4 | -15.5 |
| Anti-Friction Bearings & Components | 88.8 | 90.8 | 91.9 | - 3.4 |

Union Protectionist Strength Grows

Washington — Trade protectionist groups are planning to take the offensive in Congress this year and plump for restrictive legislation to curtail foreign competition with U. S.-produced goods.

A major stratagem of the campaign calls for a broadened base of support—particularly from labor unions whose members are being hurt by import competition. An increasing number of unions are showing interest in the protectionist movement (see PW Jan. 23, p. 1).

The union interest was evident last week at a Washington meeting of the nation-wide Committee on Import-Export Policy, headed by long-time protectionist leader O. R. Strackbein. The Strackbein group in the past has had limited labor membership and little support from unions.

Protectionist support is already being mustered in Congress for several legislative proposals. Bills now being pushed in the present Congress include:

• A stopgap measure to freeze

U. S. foreign trade policy in its present stance and bar any tariff-cutting negotiations at the Geneva spring meeting of the General Agreement on Tariffs and Trade (GATT).

• The Strackbein Committee's proposal, which would broaden escape clause remedies of the present trade law and limit the President's power to veto U. S. Tariff Commission recommendations.

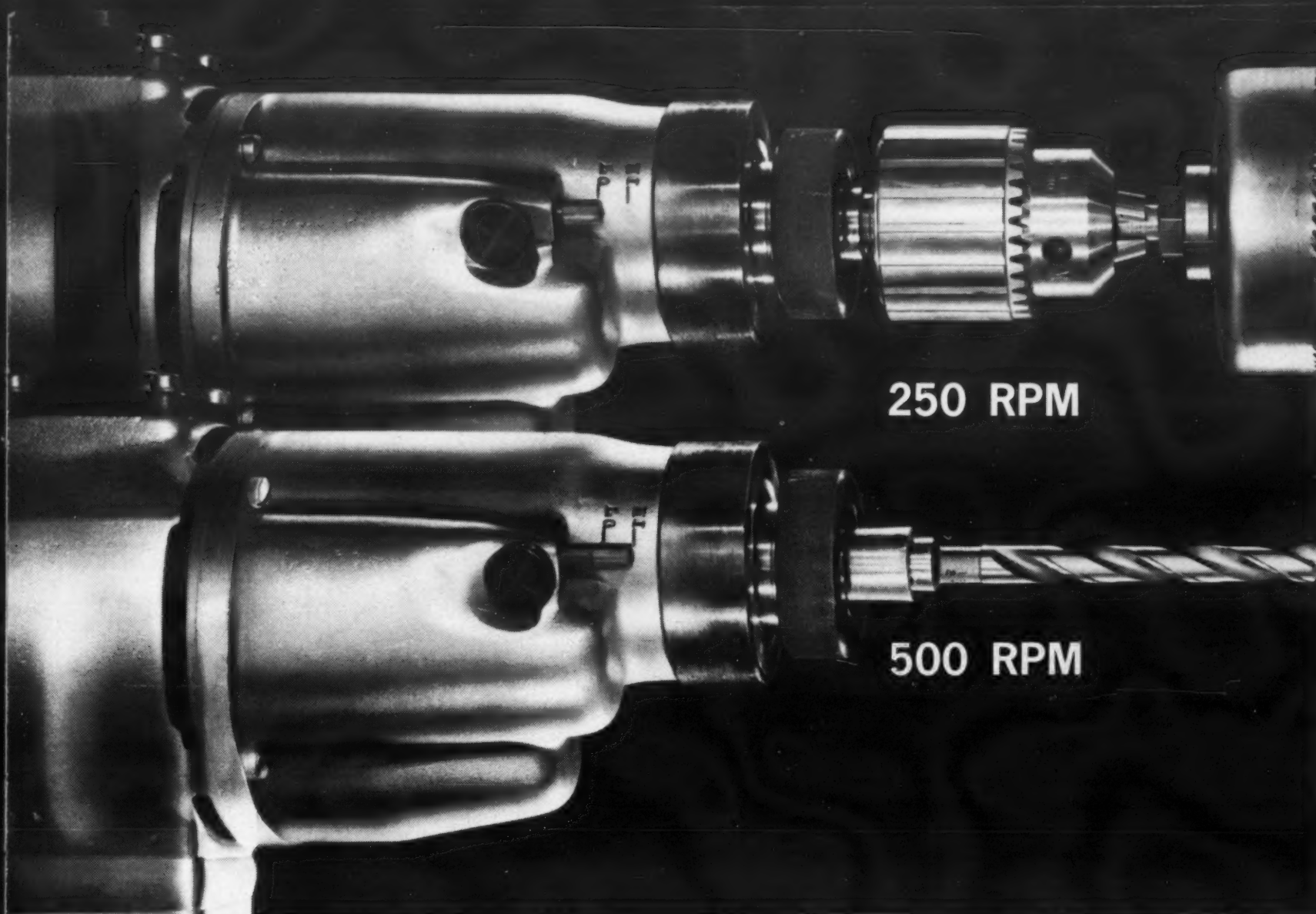
Unions which sent observers to the Strackbein meeting included the International Brotherhood of Electrical Workers, Carpenters, Boilermakers, Paper Workers, and Aluminum Workers, Molders, Amalgamated Clothing Workers, Brick and Clay Workers, and Aluminum Workers. Unions already participating with the Strackbein group at the conference included Flint Workers, Glass and Ceramics Workers, Leather Goods, Plastics and Novelty Workers, Meat Cutters, Photo-Engravers, Seafarers, United Mine Workers, Potters, and Painters and Paperhangers.

Glass Container Makers Pave Way for Price Hike

Chicago—Aluminum and tinplate producers hurled their best cost-cutting sales pitches at the National Canners Assn. convention here last week. At the same time, glass container manufacturers began preparing buyers for the possibility of price increases around April 1.

Producers of glass containers, who will be hit with a 3% wage increase effective March 1, told PURCHASING WEEK two months ago that higher prices were a distinct possibility this year (see PW Dec. 26, '59, p. 25).

Statements by leading glass container producers last week suggested that they were about convinced the 1%-3 1/2% increases posted on metal can prices Jan. 1. had given them the necessary maneuvering room, and the upcoming wage boosts the appropriate excuse for some price action of their own. Companies apparently were waiting for Owens-Illinois, the largest glass container maker, to set the pace—both as to timing and amount.



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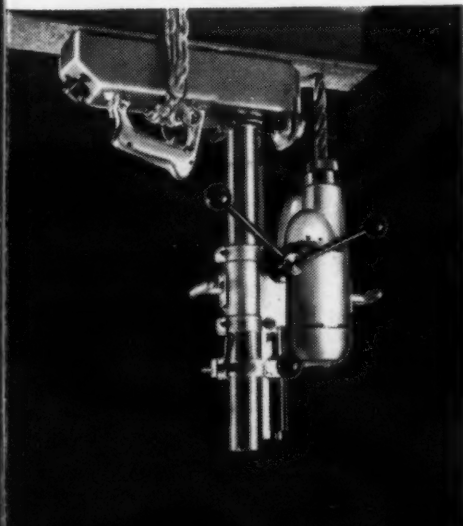
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equipped with the new 1 1/4" Two-Speed unit operates manually or by exclusive remote control. Work against the ceiling, right side up, or sideways. Gets into tight spots easily, rapidly. Also 3/4" (single speed) model.

DuPont to End Textile Rayon Output

Wilmington, Del. — DuPont Co. will end its rayon output for the apparel market in August when it shuts down its textile rayon operation at Old Hickory, Tenn. The plant begins commercial production of Dacron polyester filament yarn this week.

DuPont attributed its exit from the rayon market to "steadily declining" demand for the fiber over the past few years. However, the company will continue to manufacture high-tenacity rayon yarn for tire cord and other industrial uses at its plant in Richmond, Va.

DuPont expects to achieve an annual production capacity of 56-million lb. of Dacron staple and filament at Old Hickory. This volume, coupled with Dacron production at its Kingston, N. C., plant, will give DuPont a yearly polyester capacity of 100-million lb.

The decline in rayon demand began ten years ago when industry production was 325-million lb. annually. This shrank to 176-million lb. in 1959. DuPont began cutting back its rayon operation in 1953 with the closing of its Buffalo, N. Y., rayon plant.

Four Electrical Firms Accused of Price Fixing

Washington—A federal grand jury has indicted four electrical equipment manufacturers and two officials of the companies on charges that they conspired to fix prices in the sale of composition electrical resistors to both industrial and military customers.

The defendants, against whom civil suits also were filed, include: International Resistance Co., Philadelphia; Allen-Bradley Co., Milwaukee; Stockpole Carbon Co., St. Marys, Pa.; and Speer Carbon Co., St. Marys. Individuals named were George W.

Vater, Allen-Bradley's electronic components division sales manager, and Edward W. Butler, Speer's marketing vice president.

International Resistance said it would give the Justice Dept. "full cooperation" in its investigation. A company spokesman noted that its 5% tolerance resistor had increased in price only 21% during the past 20 years, whereas the cost of copper, a major part of the unit, had increased approximately 150%.

The indictment, returned by a grand jury at Dayton, Ohio,

alleged that as early as 1955 the defendants conspired to fix and maintain uniform prices and to require some distributors to adhere to prices fixed for sale to the armed forces.

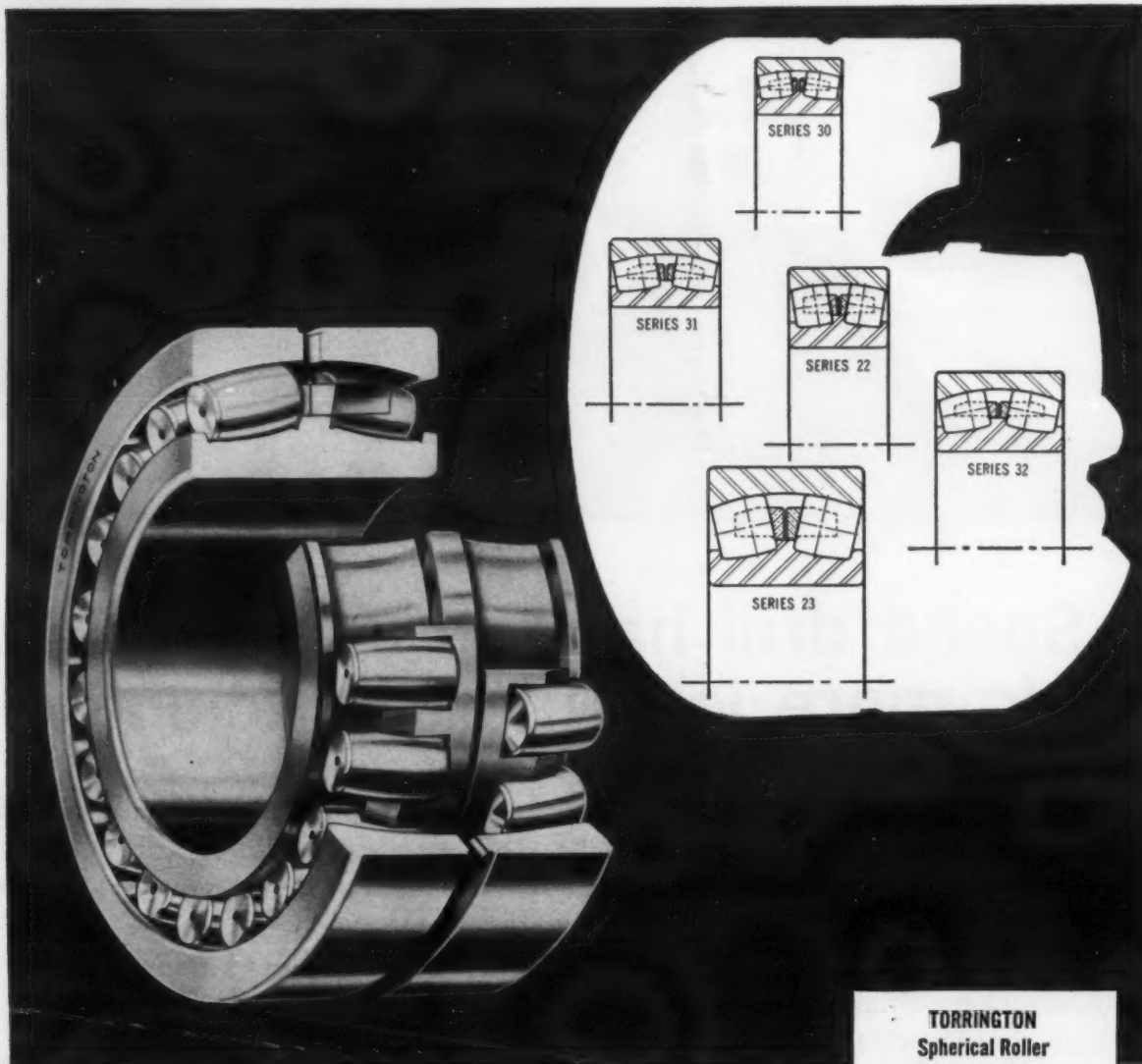
In other antitrust actions last week, the Justice Dept. challenged American Smelting & Refining Co.'s stock holdings in General Cable Corp. and Revere Copper & Brass and asked that ASARCO be ordered to divest itself of its shares in both firms.

In a separate action, the government charged that nine acquisitions by General Cable Corp. violated the Clayton Antitrust Act and asked that the company be required to divest itself of ownership in the firms.

In the suit against ASARCO, the government based its charge on the claim that ownership by American Smelting, a producer of basic copper, in the two fabricators tended to increase concentration in the copper industry and reduce competition between producers and fabricators of the metal. The suit asked that General Cable and Revere be enjoined from buying refined copper from American Smelting on "other than a freely competitive basis."

In the General Cable case, the government challenged the company's acquisitions on the grounds that they may substantially lessen competition in the manufacture, distribution and sale of electrical wires and cables. The complaint described General as the nation's largest producer of copper and aluminum wire and cable with 1959 sales of more than \$170-million.

Under attack were General's acquisitions of these firms: General Insulated Wire Works; New England Cable Co.; Clifton Conduit Co. Inc.; Alphaduct Wire & Cable Co.; Metal Textile Corp.; Hathaway Patterson Corp.; Cornish Wire, Inc., and Indiana Steel & Wire Co., Inc.



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ICC Delays Target Date Of Order Freezing Rate Differential on East Coast

Washington — The Interstate Commerce Commission has postponed the effective date of its order freezing freight rate differentials between North and South Atlantic ports until a federal court at Boston rules on pleas that the order be set aside.

The ICC on Jan. 3 rejected a move by railroads serving ports at New York, Boston, and Portland, Me., to reduce certain rates to match lower levels in effect at Philadelphia, Boston and Norfolk ports. The rates involved are those covering export-import shipments into the Midwest.

The commission held that to kill the differential would touch off a rate war because Southern ports already had served notice they would retaliate by lowering their charges. The commission also said the Northern ports still handle most of the export-import traffic despite a decline in their share in recent years.

The ICC's decision is being challenged in federal court by the New Haven and Boston & Maine Railroads, both of which serve the port of Boston.

Increasing Demand for Magnesium Presages 'Substantial' Price Boost

Detroit — Use of more and more magnesium in consumer items such as automobiles, ladders, and other products has led some market authorities to predict price increases soon, particularly in the case of magnesium anodes.

J. M. McGinnis, sales vice president of Standard Magnesium Corp., last week forecast a "substantial" industry-wide price increase for anodes. He said cutbacks in primary magnesium products, dwindling sources of magnesium scrap, and the rapid increase in the use of consumer product magnesium were tightening the market for the metal. Add to this the increasing labor and product cost, he said, and "it is easy to see why the price of anodes will have to be raised shortly."

An indication of how demand for magnesium is building up among automotive producers is provided by Robert Pittsley, magnesium sales manager for Dow Chemical in Detroit, who predicted that the automotive industry will be using 10 to 15 lb. of magnesium per car by 1965. This would mean 50-million to 100-million lb. market to magnesium suppliers. Such an increase, he said, will have to be at the expense of aluminum, plastic, and zinc. American-made automobiles now contain between 1 and 1½ lb. of magnesium, but by 1963 that total will be up to an estimated 3 lb. per car.

"Large transmission parts offer the greatest current potential for increased magnesium poundage on Detroit engineered cars," Pittsley said. "The highly successful use of magnesium in the crankcase and transmission of the rear-engine Volkswagen indicates this metal will perform successfully in corresponding parts and areas of American vehicles."

Volkswagen uses 41.2 lb. of magnesium per car. This amounts to approximately 44-million lb. per year. The rest of the European automobile industry (excluding Great Britain) adds another 8-million lb. to the continental magnesium market.

Largest single application of magnesium in U.S.-built cars is the dash console in some 1961 Chevrolet models. It weighs 4½

lb. Lancer instrument clusters are magnesium. Fuel pumps, fan spacers and oil filter parts are also cast in magnesium in other cars.

Metal costs Detroit auto-makers 29.35¢/lb. Secondary aluminum costs them 23¢/lb. and zinc 19.3¢/lb. But a pound of magnesium has twice the volume of aluminum and four times that of zinc. Thus, in terms of volume, it is less expensive than the other materials.



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Gulf States Land to Build Facility to Produce Steel From Copper Waste Slag

New York—Gulf States Land & Industries, Inc., will start building a mill to produce steel from waste copper slag at Anaconda, Mont.

The facility, slated to go on stream in 1963, will feature a new process for extracting the 33% or more of iron left in the copper slag. The new method, developed by Koppers Co. and Strategic Materials Corp. working together with Gulf States, involves a direct reduction of the slag with limestone and coal, plus the use of electric refining furnaces.

Gulf States, a subsidiary of Webb & Knapp, has a contract to purchase slag from Anaconda Co.'s 40-million ton pile here. The mill also will buy slag from Anaconda's smelter at 25¢/ton.

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Construction Industry Seen Shaking Slump Soon

New York—The current construction slump may soon give way to a smart spring and summer pickup strong enough to firm up lumber tags and allow suppliers to hold onto recent boosts in asphalt roofing, wall plaster, gypsum board, plumbing brass, and paint.

Expectations of uptrend are based on these signposts:

• **Awards**—In the first three weeks of January, *Engineering News Record's* tabulation of contracts let ran a sharp 36% above a year ago. Leading the

pack was industrial buildings—indicating the capital expenditure may turn out to be a much stronger prop in 1961 than many experts are now predicting.

• **Applications** — The F.H.A. reports that applications for mortgage insurance on proposed new houses took a sharp 6% jump in December. This is the first rise of this key building indicator since last August.

• **Vacancy Rate** — Stabilization of supply and demand for new housing is indicated by the leveling off in the rate of rental

housing vacancies being reported.

• **Mortgage Money**—The Federal Reserve Board's easier money policy has resulted in a greater supply of mortgage money at cheaper rates. Thus, the average conventional mortgage called for only a 6.15% interest rate at the beginning of 1961—compared to 6.25% in mid-1960.

Construction experts see the December 1960 level of 990,000 units (seasonally adjusted annual rate) rising to about 1.3-million units by mid-year.

Petroleum Prices Ride High in East, But Competition Shaves Tags in West

New York—Petroleum prices are riding high in the East on the crest of a wave while tags read much lower west of the Rockies.

In residual fuel oil, local West Coast prices range from \$2.05 to \$2.45/bbl.—with the lower quote almost 5% below a year ago. But east of the Rockies, residual prices are 10% to 15% above year-ago levels. Light distillate prices also are generally firmer in the East.

The recent increase of .3¢/gal. for kerosene, No. 2 fuel oil, and diesel oil in the Southeast and Gulf Coast areas pointed up the situation. Commenting on it, one Eastern oil executive said, "distillate prices look strong here. They may have reached their peak, but they could go up a little more if the cold weather holds out."

On the West Coast, however, distillate quotes haven't changed significantly over the year. And as one large refiner pointed out, "There's tougher competition and heavier discounting in the West in both distillates and gasoline."

Other signs pointing to the disparity between Eastern and Western petroleum prices are:

• **Esso's** recent increase of up to 12¢/gal. for motor oils—in the East, with no such price movement being reported for the West Coast.

• **Gasoline** tags also showed more than usual winter strength in the East, while on the West Coast they were running some 4½% below last year.

Latest supply figures indicate a continuation of the East-West price differences. Distillate inventories fell by 7½-million barrels east of the Rockies last week, but on the West Coast these inventories were built up by close to 600,000 barrels.

Residual stocks also fell slightly in the East, while rising some 550,000 barrels on the West Coast. Remarking on this situation, one Eastern source said, "We've had to ship residual in from the West Coast every so often to fulfill customer commitments." This involved a loss for the company because tanker rates have increased sharply.

The short supply of residual (1960 saw stocks decline more than 14% over the year) was largely responsible for the higher prices for this product. The decline in supply more than compensated for a 10% drop in demand over the same period.

Industry experts suggested two reasons for the falling supply of residual:

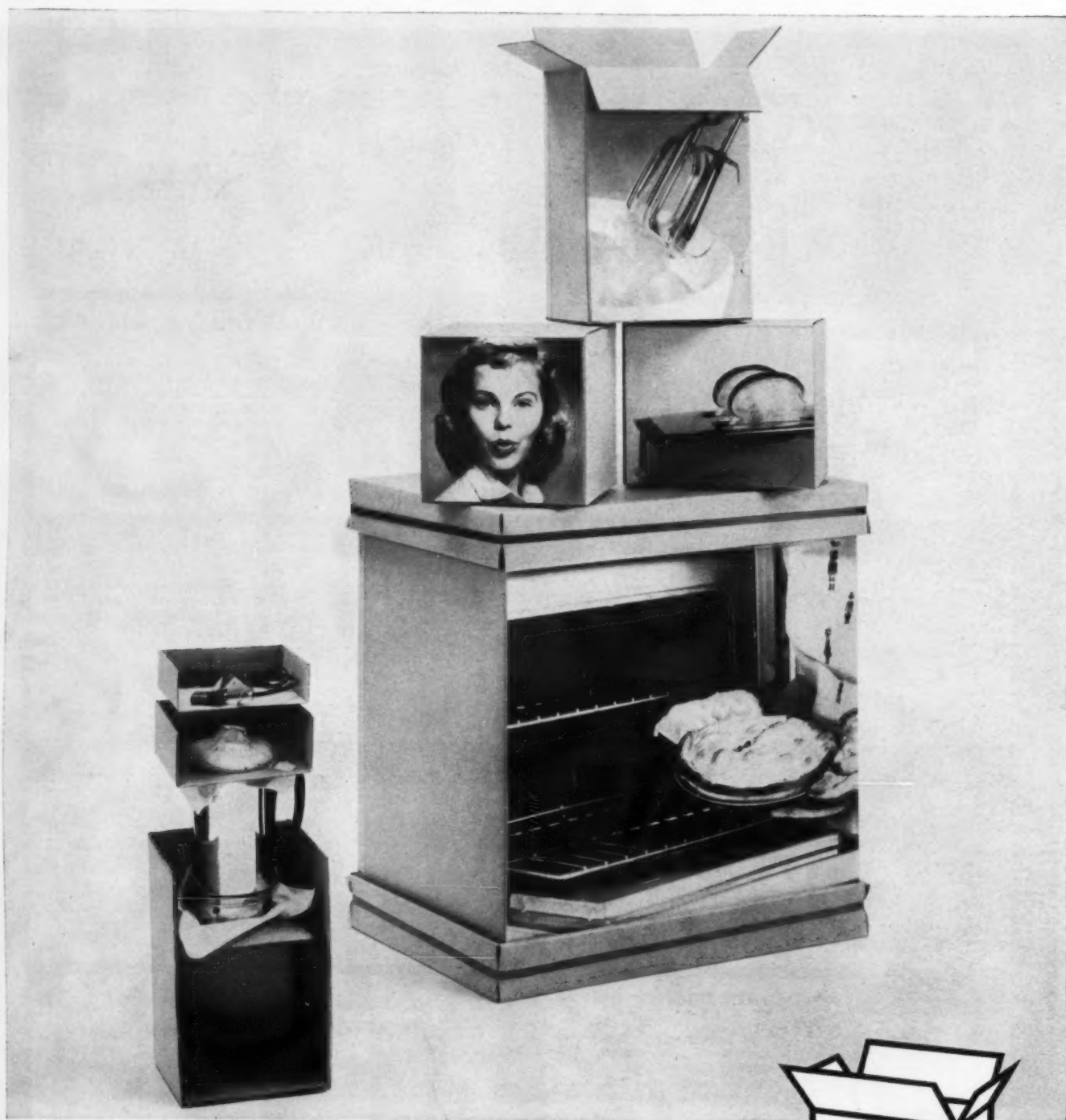
1) The weak residual price levels of a year ago caused a step-up in company coking operations—that is, cracking residual oil into lighter distillates and gasoline.

2) In 1960 more than the usual amount of low residual crude oil was imported.

New Rotary Casting Line Makes Aluminum Tubes Directly From Ingots

Hawthorne, N. J.—A new rotary casting line at the White Mfg. Co. plant here is turning out collapsible aluminum tubes directly from primary aluminum ingots at the rate of 750,000 units a day.

The entire operation is completely automatic. Aluminum ingots are melted and drawn into strips ¾ in. thick by 8 in. wide. The strips are then rolled and fed into a slug-blanking press which punches out 25 to 30 lb. of round slugs per minute. The finished slugs are carried by conveyor to impact extrusion presses which form them into tubes.



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King-Size Tank Cars Help Shippers Profit From Favorable Volume Rates

New York—ACF Industries, Inc., sees double-size tank and hopper cars as one means of obtaining rate concessions for industrial shippers.

The company's Shippers' Car Line Div. which leases cars to industry, plans to add 400 king-size tank cars to its fleet of 190 during 1961. The cars have a 20,000 gal. capacity, compared with 8,000-10,000 gal. for conventional cars.

The division also is building covered hopper cars with capacities of 3,500 cu. ft., compared with the standard size of 2,100 cu. ft.

Detailing possible savings to be obtained through use of the larger cars, Henry V. Bootes, Shippers' president, cited typical freight reductions:

For the king-size tank cars, a cut of 52¢/100 gal. in the cost of shipping coconut oil.

For the large hoppers, a decrease of \$1.20/ton in the cost of hauling soda ash.

Additional savings for shippers using the large cars come in lower per ton loading and unloading costs. For instance, use of Shippers' Ship-O-Matic and Chem-O-Matic pneumatically unloaded hopper cars has reduced car unloading cost by as much as \$3/ton, says Bootes.

He cites the following ways in which larger cars pave the way for rate reductions by cutting railroad costs:

• **Switching.** The bigger cars carry more, so few of them are needed and thus less switching is required.

• **Crews.** The same size crew is used in running a train of 100 standard-size cars, or 100 king-size cars carrying twice as much, so in the long run fewer men are needed.

• **Power.** One king-size car weighs less than two conventional cars, which means that less pulling power is required.

• **Repair and maintenance.** Fewer cars also result in lower costs here.

Favorable volume rates, however, are not a blank check for the extra-large cars, Bootes noted. Drawbacks include lack of adequate storage space, a problem with some customers, and heavy weight of some commodities. The heavier products (weighing 9½ lb./gal. or more) cannot fill the larger tank cars

to capacity because of the maximum limit of 251,000 lb. that can be carried over rails on a four-wheeled truck.

Bootes said that the trickle of rate concessions for volume shipments already granted by the railroads should develop into a steady flow during the coming year.

This, in turn, should mean growth for car leasing in general as the field becomes more competitive with other forms of transportation, he said.



PNEUMATIC UNLOADER: Shippers' Car Line Ship-O-Matic and Chem-O-Matic hopper cars reduce costs by cutting loading and unloading time for dry cargo.



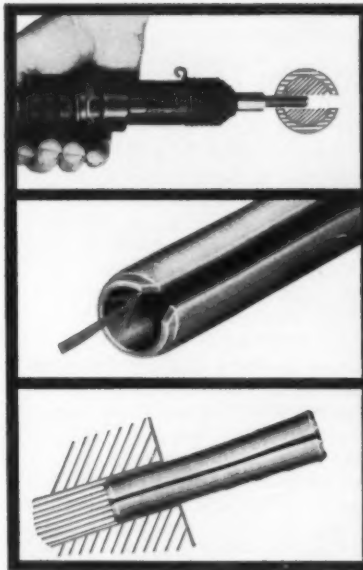
DOUBLE-SIZE TANK CARS: 20,000 gal. capacity of shippers' tank cars enables both shippers and rails to cut transportation costs. Cars may be leased.

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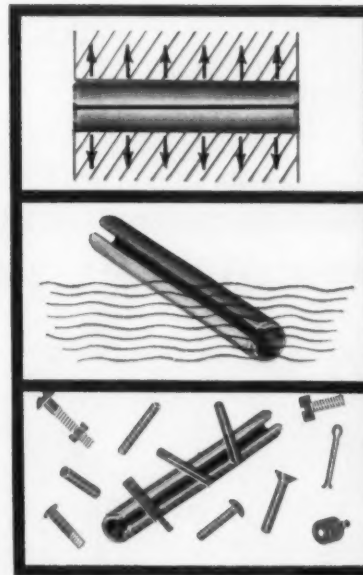
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Collins Radio Organizes Separate Service Section

Cedar Rapids, Iowa—Collins Radio Co. has established a separate division to improve customer service and deal more effectively with problems arising from the increased trend toward systems type activities in the electronics industry.

The new service division consolidates present service activities of Collins' Western, Texas, and Cedar Rapids divisions and those of Collins' subsidiary, the Alpha Corporation.

Service functions include factory repair and modification for customer equipment, field service for customer's equipment and providing training for customer, company, and distributor technical personnel.



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The Executive Syndrome

Psychiatrists, social scientists, and other such licensed thinkers have been busily dissecting the popular view that the modern executive is an ulcer ridden, hard drinking fellow, suffering from tensions induced by overwork—that, in short, he is a victim of today's fast, man killing pace.

One group of analysts, repudiating the notion that overwork is at the bottom of it all, argues hotly that the job itself contributes only a minor part to executive stress. Most tensions, according to Dr. Desmond O'Neill, a British industrial psychiatrist, come from status seeking, rivalry with equals, loss of contact with staff, and the like. There are about 40 stress disorders, he says, that can be attributed to these causes, half of which show up as mental and emotional problems, the rest in physical disturbances.

Another group holds that overwork is merely a symptom of tension and not a cause—and that actually the tense businessman is seeking an escape from his frustrations in work, to which he has become addicted in the same fashion as an alcoholic craves drink. Dr. Nelson Bradley, a spokesman for this group, says that such men develop acute withdrawal symptoms when they are threatened by the prospect of a weekend's or vacation's inactivity.

A third school of thought takes the stand that executives are no more prone to stress disorders than any other occupational group. "We feel that the tales of hard-drinking, ulcer ridden, portly executives are largely myths which belong to the past or have never been fully substantiated," says Thomas S. Sexton, a vice president of Massachusetts Mutual Life Insurance Co. His opinion is based on a recent survey that showed that the incidence of heart and artery diseases and hypertension cases among executives is less than that for other groups.

A fourth group aligns itself against the whole corps of diagnosticians and advances the view that worry is actually a good thing, because it's designed to keep people on their toes and help them adapt to a society in constant flux. One of this group, Dr. Gerald Gordon, chief of the psychiatric section of the medical division of Du Pont, states flatly, "If a man wants to worry, let him. The idea that a nervous man must be removed from a situation, leave work, clamp down and rest is a delusion."

What Dr. Gordon seems to be advocating is a neo-Darwinistic view of the businessman's function in society. Says Dr. Gordon, "Modern man seems to have forgotten that life itself is a conflict. So is society. The full free life, which often includes a good scrap, has become secondary to the desire for constant peace and tranquility."

Widening the Mechanization Gap

Are we falling behind in the race for automation? Is the U.S. losing its leadership in production ability?

Prof. James R. Bright of the Harvard Graduate School of Business Administration asks these questions in an article in the Harvard Business Review and comes up with some disturbing answers. For one thing, although we are generally ahead in "pure physical capacity," we are beginning to lose out in concepts. In many cases, "we are the followers, not the leaders in manufacturing advances," says Prof. Bright.

He cites a few cases to support his contention that we are losing ground:

- Recently, the vice president of manufacturing of a major food processing concern told Bright, "In the past three months I have visited 55 plants in Europe, all built in the last four years. It is appalling to see how far behind we are."

- A major electrical equipment firm has replaced periodic "scouting trips" to Europe with permanently stationed engineers to keep the home office advised on significant production machinery progress abroad. "This firm has an astonishingly fine mechanization record of its own," Bright points out. "Yet foreign competition is seriously encroaching on its international and domestic markets."

- From his experience in conducting advanced training for industry on the mechanization of materials handling and storage, Bright finds that European participants, representing some 16 countries, are embarrassingly competent in what the U.S. regards as the latest advances. "We find, for example, that the most advanced transportation container system is Swedish, the fastest bottling line is British, and the most highly mechanized machine tool plant is Russian," he disclosed.

Bright stresses that although we still have an edge in production imagination and capacity, we had "better rouse ourselves to new efforts" if we want to keep our lead—and even widen it in the Sixties.

What must American industry's answer be? Bright suggests that management develop and lead an aggressive program of mechanization, but he warns that a "simple, one-time effort at equipment replacement is not enough."

"Most firms will have to develop programs of continuous technological advancement in manufacturing processes and equipment, as well as in materials and product design. A philosophy of perpetual dissatisfaction with the status quo must become a part of corporate policy," he concludes.

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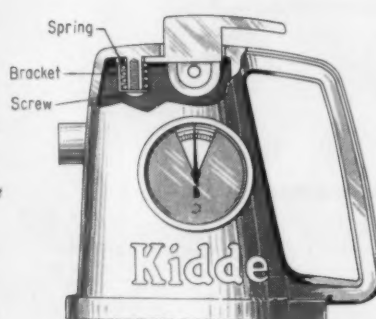
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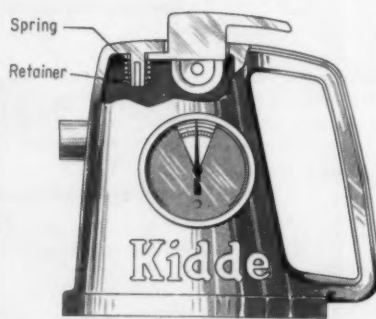
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WHAT VALUE ANALYSIS CAN DO FOR YOU



BEFORE ANALYSIS: Spring for dry chemical fire extinguisher trigger was held in place by a self tapping screw fastened to an angle bracket.



AFTER ANALYSIS: Special push-on fastener held spring in place. Bracket and screw were eliminated, assembly time cut.

Source: Walter Kidde & Co., Inc., Belleville, N.J.

TECHNIQUE:

Simplify fasteners to speed assembly.

SAVINGS:

Assembly time cut

66% (11¢ to 3.7¢).

What sort of training in traffic and transportation do you give your buyers?



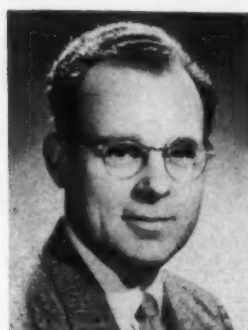
A. V. Kinner, purchasing manager, U. S. Rubber Co., Detroit:

"Each year as part of our purchasing department training program we invite the traffic manager to conduct a session covering traffic and freight considerations. In addition, our traffic department issues an inbound routing guide to assist the purchasing department in selecting the best method of shipment and the preferred carriers. Finally, informal sessions are held from time to time to settle individual problems."



Albert Handler, director of purchases, Mattel, Inc. (toymakers) Hawthorne, Calif.:

"It consists of their becoming familiar with traffic terminology and its application. Purchasing uses the services of our traffic department to properly classify and route incoming materials without creating additional problems and overhead within the buying group. When a commodity changes in specifications, purchasing notifies traffic. Traffic then advises what action to take."



Edgar Stolle, director of purchasing, Hamilton Shoe Co., St. Louis, Mo.:

"Both the purchasing and traffic department maintain constant contact which enables us to use a very simple system of on-the-job training. Routing for volume items is obtained by the buyer from the traffic department. On specialty items the buyer works with traffic, checks and initials freight bills, which gives him a 'hand in' on delivery time and costs."



L. F. Bronke, purchasing manager, Webcor, Inc., Chicago:

"Periodical meetings are conducted by the purchasing department to review with buyers information pertinent to selection of carriers, routing, packing, delivery time, insurance, etc. This joint effort results in substantial savings and eliminates many problems prior to normal occurrence. In these meetings, we attempt to exchange ideas between buyers which creates a more efficient operation."



R. M. Cornwall, director of purchases, Speed Queen, div. of McGraw-Edison Co. (laundry equipment), Ripon, Wis.:

"Because the traffic function is a very detailed and complicated procedure, we spend very little time in training our buyers in traffic procedures. We feel we can rely on guidance and direction from our traffic department when other than normal situations arise. The traffic function, like purchasing, is performed by trained personnel who work closely with our buyers."

The Real Mr. Hartman

A. P. Hartman, manager of purchases, Elliott Co., a division of Carrier Corp., Jeannette, Pa., was one of the PURCHASING WEEK Asks respondents two weeks ago—Jan. 16. However, the picture published with his comments was not of Mr. Hartman. Here's what this Pennsylvania P.A. looks like →



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Common Carriers Vs. Private Trucking: Look Before Leaping

Dallas—The P.A. in a position to make (or influence) a choice between private truck fleet or common carrier had better come armed with plenty of data on such factors as costs per mile, deadhead runs, and idle time before taking the plunge.

A strong case can be made for both types of transport, industry experts say—and only the P.A. who has boned up on all the facts will be able to make the choice that is most profitable for his firm.

It's a decision that more and more P.A.'s with traffic management responsibilities will be forced to make as companies that do a lot of truck hauling step up their drive to cut transportation costs.

Right now, with freight rates inching up, many companies are finding they can hold down transportation expenses and often ship their products faster by doing the job themselves. In recent months, such giant corporations as Montgomery Ward, Admiral Corp., General Electric, and Burlington Industries have made the switch to private truck fleets or have expanded their do-it-yourself trucking operations.

Private Trucking Rise

Since World War II, private trucking has zoomed from 30-billion ton miles a year to a record 143-billion in 1959. This compares with a growth in for-hire trucking of from 25-billion ton miles to 84-billion ton miles.

The case for the common carrier is summed up by N. E. McMurry, secretary-treasurer, East Texas Motor Freight Co., who says, "Perhaps the most obvious advantage the common carrier has is the efficient utilization of equipment. The common carrier has daily schedules, which are loaded at or near maximum capacity of the vehicle."

R. W. Anderson, regional

manager Hertz Corp., emphasizes the advantage of leasing trucks, rather than owning a fleet outright. "Virtually any firm who investigates will find after a careful study that the cost of operating a leased fleet very closely approximates the cost of ownership," Anderson says. Moreover, he points out, you don't have to invest capital in buying and maintaining a leased truck.

Six Points to Consider

A major difficulty facing the P.A. who has to decide between the two methods is in properly allocating costs. McMurry lists six cost points to be considered before taking the plunge into private ownership:

- Developing the specifications you will need on your truck before you buy.
- Making provisions to repair and maintain the trucks you do buy.
- Hiring and training drivers.
- Buying vehicle insurance.
- Providing insurance against cargo loss and damage.
- Adding more administrative and clerical help.

McMurry contends these costs account for 50% of the total operation and maintenance of a truck fleet. "Thus, when the equipment sits idle part of the time, these fixed costs must be allocated over fewer miles and thus the cost per mile is increased greatly," he argues.

In short, McMurry's point is that the common carrier can resolve the problem of higher cost per mile by removing the need for scheduling. "In any event, the rates of common carriers do not provide for movement empty one way, whereas the transportation costs of the private fleet owner will, in effect, include the cost of empty return."

He warns that another pitfall of the private fleet owner is justifying some purchases on the basis

that it "costs nothing to haul, since we have the trucks anyway." A fully costed approach, he contends, would show that a low cost distant purchase under these circumstances may run up a higher price than a more expensive purchase closer to home. And it is possible that some common carrier may have a special volume rate for the long movement, because it is back haul traffic for the carrier.

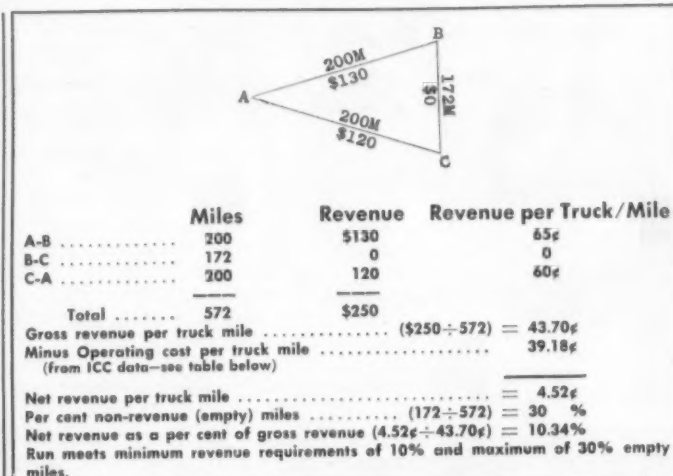
"As for the aim of offering better service through a private fleet," McMurry told PURCHASING WEEK, "the private fleet owner faces the same problems that the common carrier does. Custom service is more costly than normal service, and the more special the service the higher the cost."

"Any type of custom service tends to reduce the percentage of utilization of trucks, requires more personnel, and thus has a much greater unit cost of handling, whether by private fleet or by common carrier."

Different Viewpoint

A different view point is advanced by W. L. Fayle, director of transportation, Burlington Industries, Inc. Fayle operates the company's private fleet as though it were a common carrier—to make a profit on every haul. Instead of looking over the individual items that make up total costs, he uses truck earnings and costs per mile to judge whether Burlington's private trucks are making a profit. This takes in both costs and dead-head or partly loaded runs.

Here's how Fayle's system works: He assumes that the present common carrier rate structure permits running up to 30% non-revenue, or empty, miles, provided the truck mile earnings exceed operating costs (including overhead) by a minimum of 10%. In other words, he figures that a 30% deadhead portion can be



Truck Mileage Cost

Cost per truck-mile of Class 1 motor carriers for 1959, according to estimates made by Interstate Commerce Commission.

| | Cost in Cents Per Truck-Mile 1959 |
|---|-----------------------------------|
| Repairs and Servicing | 6.52 |
| Tires and Tubes | 2.39 |
| Maintenance supervision and garage overhead | .86 |
| Sub-total—Equipment maintenance | 9.77 |
| Fuel and Oil | 4.05 |
| Drivers' wages, including workmen's compensation and social security taxes* | 10.01 |
| Drivers' supervision and other transportation overhead | 1.16 |
| Depreciation | 3.22 |
| Fuel and oil taxes | 2.02 |
| License and registration fees | 1.07 |
| Insurance and safety expense | 1.19 |
| Total direct expense | 33.29 |
| General overhead expense | 5.89 |
| Total expense, including overhead | 39.18 |

*Drivers' wages may be expected to average more than 15 cents per mile on extremely short-haul traffic, for on such hauls wages are based on hours of service.

covered by a 10% profit based on outside trucking costs.

Fayle gets his 30% deadhead figure by assuming trucks operate empty 15% of the miles traveled, and lightly loaded 15% additional miles. If trucks run empty more than 30% of the miles, Fayle adds an additional 3 1/3% to operating costs for every dead-

head percentage point over 30%. For a 31% rate, he multiplies operating costs by 103%; for 32% by 106%, and so on. This speedily cuts into the minimum 10% profit or margin, he points out, so the idea is to minimize empty runs.

The accompanying illustration shows how Fayle figures earnings per truck mile. This run meets minimum revenue requirements of 10% and keeps non-revenue miles within 30%. Beginning at Terminal A, the truck runs 200 miles for which it earns \$130 or 65¢ per truck miles and delivers a shipment to plant at B. To avoid running back empty from plant B to Terminal A, operator runs 172 miles empty at no revenue to Terminal C, picks up a load, and returns to Terminal A, 200 miles distant, producing \$120 or 60¢ per truck mile.

The truck moves a total of 572 miles on this triangulated operation and produces a total of \$250 or 43.7¢ per truck mile (250 divided by 572). Putting against this income the operating cost per mile of 39.18¢, this leaves a net revenue per truck mile of 4.52¢ or 10.34% of gross revenues, which meet Burlington's minimum requirements.

For his operating cost-per-mile of 39.18¢, Fayle uses mileage data developed by the Bureau of Cost Finding and Valuation, Interstate Commerce Commission (see chart). This ICC cost estimate includes overhead.

"When you use the word triangulate, it doesn't have to be a triangle," observes Fayle. "It can be a four-sided figure or a six sided figure or anything else."

The main idea is to be flexible enough to schedule profit making hauls, or re-schedule losing runs.



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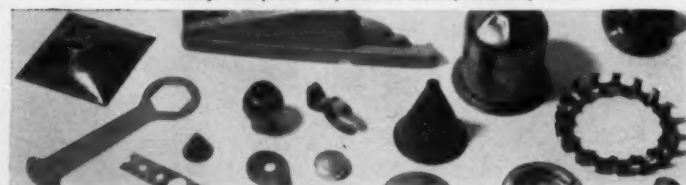
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Packaging Expert Lists Guideposts For Purchasing Corrugated Boxes

New York—Seven guideposts for informed buying of corrugated shipping boxes for the food industry were spelled out for P.A.'s at a Food Buyers Forum of the Purchasing Agents Assn. of New York.

Some Considerations

Joseph Scher, New York general manager, Paper Products Div., Owens-Illinois Glass Co., emphasized that before choosing the correct corrugated shipping box for his product the buyer must consider: condition of the product to be packed; storage, warehousing and handling, and mechanical aids for packing the product.

Improvements in corrugated shipping boxes bring new considerations to the job of the purchasing agent, Scher pointed out. Specially constructed shipping boxes, he said, are available for dry or wet products or for those in bottles or cans.

Other guideposts listed by Scher included: how the product will be shipped, merchandising possibilities, new methods of packing for shipment, and pricing.

Last Word Unspoken

"I do not believe the last word has been said on the proper shipping units and I shall not be surprised to see smaller case sizes selling as units from the shelf just as the six packs," he told the group. "Little imagination has

been put into the shipping box as a merchandising unit."

Discussing prices paid for shipping boxes by food companies, Scher illustrated the difference between cost and price by saying, "The service, know-how and research into your plant's shipping problems, the flow of information, knowledge and ideas that come from your exposure to the proper vendors, are as important to the economics of the box as the price."



JOINT MEETING of Tulsa and Oklahoma City Purchasing Agents Associations featured NAPA President Paisley Boney. Pre-meeting confab includes: (l-r) E. J. Jameson, pres., Tulsa Assn.; Boney; W. C. Adamek, District 2 v.p.; and R. J. Hood, pres., Oklahoma City Assn.

N. J. Chemical Buyers

New Brunswick, N. J.—The Purchasing Agents Assn. of North Jersey has formed a chemical buyers group with George W. Radcliffe, P.A. of Permacel Div. of Johnson & Johnson, as chairman.

Thomas H. Gill of Congoleum-Nair is vice chairman. Michael Swoboda, Shell Chemical Corp., is membership chairman.

One of the group's chief aims will be to encourage schools and colleges to add courses for the "practical training" of purchasing agents. Another prime goal: to advance the purchasing profession in the chemical industry.



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Next time you need delivery in a hurry . . . have the shipment sent United air freight.



NAPA Public Utility Unit To Probe Cost Problems At Conference in Detroit

Detroit—Members of the Public Utility Buyers Group, NAPA, will meet here next week, Feb. 5-7, to review and tackle common problems.

A panel discussion on "The P.A. Speaks" is one of the main features planned for the group's annual Mid-Winter Conference at the Statler Hilton Hotel.

Panelists

Panelists include: W. C. Allen, Utah Power & Light Co.; D. J. Fitzgerald, Baltimore Gas & Electric Co.; A. W. Fox, Puget Sound Power & Light Co.; L. H. Kross, New Orleans Public Service Inc.; L. R. Tomey, Union Electric Co.; and W. L. Brown, Peoples Gas Light & Coke Co., moderator.

The program agenda includes a talk on "Lowering Costs Through Better Purchasing" by John M. Warner, purchasing agent, Philadelphia Electric Co., and one by Warren Shew, publisher of *Electrical World* on "New Era in Competition."

James J. Trebilcote, vice president, Michigan-Wisconsin Pipe Line, will discuss "Economics in the Gas Industry Operations" and Robert W. Hartwell, general manager, Power Reactor Development Co., will review "The Future of Atomic Power in the Electric Power Industry." Col. W. F. Rockwell, president, Rockwell Mfg. Co., will cover in his discussion "Purchasing and Free Enterprise."



Proper Lighting Can Mean Savings Through Impro

Minimum Light Needed to Do the Job

| | |
|--|---|
| A. Material Handling Wrapping, packing, labeling 50 fc. Picking stock, classifying 30 fc. Loading, trucking 20 fc. Inside truck bodies, freight cars 10 fc. | D. Assembly Drafting 200 fc. Rough, easy seeing 30 fc. Rough, difficult seeing 50 fc. Medium 100 fc. Fine 500 fc. Extra fine 1,000 fc. |
| B. Machine Shops Rough bench and machine work 50 fc. Medium bench work, rough grinding 100 fc. Fine machine work, buffing and polishing 500 fc. Extra fine work 1,000 fc. | E. Inspection Ordinary 50 fc. Difficult 100 fc. Highly difficult 200 fc. Very difficult 500 fc. Most difficult 1,000 fc. |
| C. Office General office work 100 fc. Accounting, bookkeeping 150 fc. | F. Storage Inactive 5 fc. Rough bulky 10 fc. Medium 20 fc. Fine 50 fc. |

Lighting is just as important a production tool as machinery, and good lighting can be a real industrial cost-cutter.

Survey after survey has proved this, and has brought about a changed attitude toward plant and office illumination. Where once lighting was a neglected step-child and the employee had to do his job—figuratively, if not literally—by the light of a dim bulb dangling from the ceiling, proper illumination has at last won recognition for its true worth.

Proper lighting, these surveys show, can:

- Help morale and so improve relationships between workers and supervisors as well as among the employees themselves.
- Create safer working conditions, reducing medical expense and lost time.
- Improve quality and cut rejection rates.

Here's an example of how proper lighting can save money for you. Owning and operating a modern 200-footcandle system usually costs about 2½% as much as a plant's total labor bill. This means that if the setup can boost worker efficiency more than 2½%, the additional return is pure profit. Research has shown that improvements are typically 5%-25%.

The recommended footcandle ratings in the box at the left are the mini-

FLUORESCENT

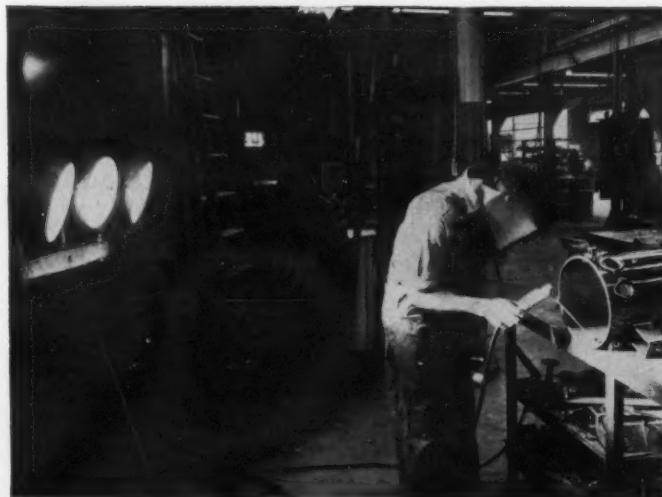


Where it's used: The workhorse lamp of industry, the fluorescent is lighting 70% of all existing installations, accounts for 80% of new systems.

Advantages: Most efficient source of lighting available. Gives even, nonglare illumination over wide area and creates little heat.

Limitations: Special ballast and fixtures needed.

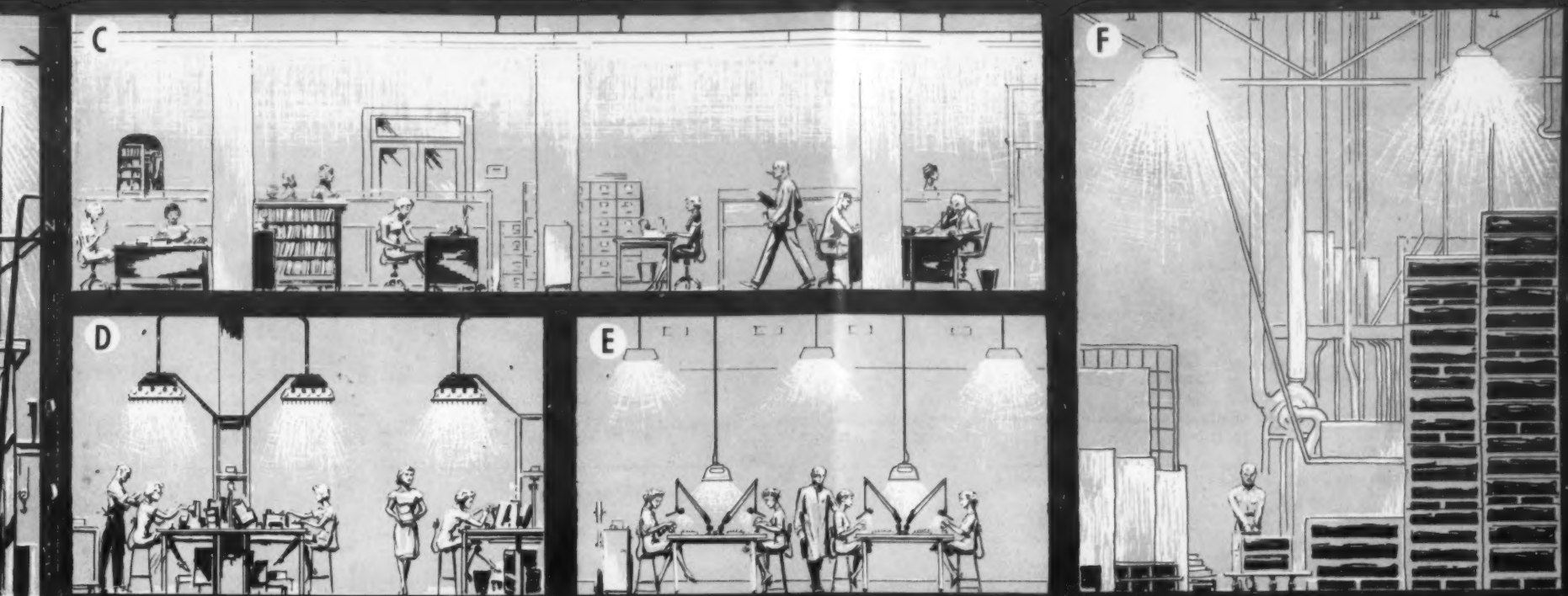
INCANDESCENT



Where it's used: Primarily used for supplemental lighting. Accounts for 25% of existing lighting, but only for 15% of new installations.

Advantages: Works on regular current and needs no special ballast or fixtures. Available in a wide range of sizes and special designs.

Limitations: Basically inefficient, it takes more electricity to produce a given amount of light.



proved Products, Morale, and Working Conditions

lum levels needed to do the job effectively. They resulted from a 10-year research project conducted by Prof. H. Richard Blackwell of the University of Michigan. Blackwell tested hundreds of different jobs to determine scientifically much light was needed to do each one. His experiments generally led to a doubling of recommended standards. The complete set of tables is published in booklet form by the Illuminating Engineering Society.

Getting the required lighting level is no job for an amateur, but the lamp and fixture makers have simplified the task by developing a standard set of formulas and tables. And since lighting is a highly competitive business, all manufacturers are usually more than glad to survey your plant. Lighting costs are composed of three elements (lamp cost, electricity, and maintenance): thus, makers often come up with plans that can lower your overall lighting costs while improving illumination levels.

There are four major types of lighting. **Fluoreseents** are used at present to handle the major share of lighting jobs, although every installation is a composite of several different types of lamps. **Incandescents** are still the leader in supplemental lighting. **Mercury vapor lamps** can do a very economical job in medium and high bay areas. A newcomer, **electroluminescence**, is just coming out of the lab, but may someday have a major effect on industrial installations—especially in the office.

What Those Lighting Terms Mean

LUMENS: Amount of total light that a bulb puts out. All manufacturers list lumen output on lamp specification sheets.

CANDLEPOWER: Intensity of the light in a particular direction. This depends on the type of bulb and fixture.

FOOTCANDLES: Intensity of the light at the work surface. It is measured in lumens received per sq. ft. of lighted surface. Footcandles can be measured with a simple device resembling common exposure meter. This device gives you the number you need to see how your lighting measures up to IES standards.

FOOTLAMBERTS: A measure of the brightness of the lighting system. It is measured by multiplying footcandles by a reflection factor for the work surface.

WATTS: This is the amount of electricity it takes to light the bulb—including power needed for ballasts and other related equipment.

MERCURY



Where it's used: Accounts for about 5% of industrial lighting, primarily in high bay areas.

Advantages: Combines high lighting efficiency with compact size. Has very long useful life (7 to 12 times incandescent).

Limitations: Extreme brightness limits use to high areas. Needs special ballast and fixtures. Color rendition sometimes a problem.

ELECTROLUMINESCENT



Where it's used: Newest light source, still limited to specialized applications such as signs or architectural frills.

Advantages: Entire panel surface glows with even light. Has very long rated life.

Limitations: Current technology limits output to low levels. Cost for large areas is extremely high.

Industry News in Brief

Adds Hospital Products

Chicago—Fairbanks, Morse & Co. has acquired a majority interest in Disposable Hospital Products, Inc., of San Francisco. The California company produces hypodermic syringes and needles designed for one time use as a guard against cross-infection of patients. The acquisition moves Fairbanks Morse into a new field of light precision manufacture.

Chemstrand-Monsanto Unite

St. Louis—Chemstrand Corp. has become a wholly-owned subsidiary of Monsanto Chemical Co. Shareowners approved acquisition of the interest of American Viscose Corp. in Chemstrand. Avisco shareholders also approved the move. Chemstrand, second largest U.S. producer of nylon and acrylic fibers, was formed in 1949 as a joint venture by Monsanto and Avisco.

More Vinyl Chloride

St. Louis—Monsanto Chemical Co. is completing a 50% increase in the capacity of its vinyl chloride monomer plant at Texas City, Texas. The additional facility will bring the plant's capacity to 150-million pounds annually by next July 1.

New Sales Agents

Pasadena, Calif.—Three Eastern manufacturing representatives have been named by Consolidated Electrodynamics Corp. as sales agents for its line of electrical connectors. They are: Eltron Engineering Sales Inc., Newtonville, Mass. in the New England area; Sunday-O'Brien, Haddonfield, N. J., in the Philadelphia area; and Bernard White & Co., Baltimore, Md. in the Baltimore-Washington area.

G. E. Computer Plant

Phoenix, Ariz.—General Electric Co.'s Computer Dept. will build a \$4-million addition to its manufacturing and headquarters facility here. The expansion will add approximately 190,000 sq. ft. to the department's present 204,000 sq. ft. building. Construction will be completed this year.

Cerro-Aluminum Merger

New York—Cerro Corp. has announced an agreement providing for the possible acquisition of the United Pacific Aluminum Corp., West Coast producer of enameled aluminum sheet and coil. The move will give Cerro an entry into the production of coated aluminum sheet products. The agreement, approved by the directors of each company, is subject to review by United's stockholders.

Alton to Make Fomecor

Springfield, Mass.—Fome-Cor Corp. has licensed the container

division of Alton Box Board Co. to produce and market containers fabricated from Fomecor board, a lightweight foamed plastic and paper sandwich material. Fome-Cor Corp. is jointly owned by Monsanto Chemical Co. and St. Regis Paper Co.

Add to Electronics Line

Manhattan Beach, Calif.—Automation Industries, Inc., manufacturer of ultrasonic, electronic, and magnetic products, has

acquired Amco Inc. of Abilene, Tex. Amco is an integrated fabricator of aircraft and missile components.

Boost Methanol Output

Wilmington, Del.—Du Pont Co. has announced plans to increase methanol production by over 35% at its Sabine River Works, Orange, Tex. Construction at Sabine has begun and is expected to be completed late in 1961.



GIANT ZINC SLABS lower handling costs. Holes in 2,500-lb pig fit tongs and . . .



LEGS AND WINGS accommodate lift truck. N. J. Zinc's unit is similar to one from Anaconda.

Now, Railway Express Agency
has a new name for the
most complete shipping
services in the world...

R-E-A EXPRESS

In the World of Sales

Thomas J. March has been advanced to manager, sales operation, **Internal Automation Operation, Industrial Electronics Div., General Electric Co.**, Schenectady, N. Y.

Stanley E. Bacon has taken the post of industrial sales manager for the midwestern region, **Behr-Manning Co.**, Troy, N. Y.

Richard Krinkel has been promoted to sales manager and Thomas Roby has been promoted to assistant sales manager, **Northwestern California Corrugated Div.**,

American Box Corp., San Francisco.

John Q. Sims was appointed general manager and general sales manager, **F. S. Edwards Tobacco Co.**, Kansas City, Mo.

E. V. Waack has been elected vice president in charge of sales, **Food Machinery Div., Baker Perkins, Inc.**, Saginaw, Mich.

Harold G. Carlson has been named manager of the newly created Brooklyn, N. Y. sales district of **Sun Oil Co.**

This Changing Purchasing Profession . . .

John N. Buckley has moved up to manager of procurement operations, **Missiles & Space Div., Lockheed Aircraft Corp.**, Van Nyes, Calif., Branch. His new post includes supervision of purchasing and inventory control functions. Buckley had been manager of materiel operations at Lockheed's Georgia Division.



Earl D. Needham has been made director of material, **Atomics International**, a division of **North American Aviation, Inc.**, Canoga Park, Calif. He succeeds K. B. Gay who was appointed to a similar post with North American's **Space & Information Systems Div.**

Neil J. Kennedy has been appointed purchasing agent for the construction and maintenance department, **Red Owl Stores**, Denver, succeeding the late Melvin L. Johnson.

Donald F. Taylor has been assigned the new post of manager of production control and purchasing, **Buick Motor Div., General Motors Corp.**, Detroit.

Norman P. Levine was named a vice president of **Landers, Frary & Clark**, New Britain, Conn. Formerly director of purchasing and planning, Levine will continue to be responsible for these functions. He joined the firm in September, 1959, as executive director of purchasing.

Robert G. Runkel has been appointed purchasing agent at Chicago by **United States Gypsum Co.** He had been serving as general purchasing agent at Toronto since May 1960.



N. P. LEVINE



R. G. RUNKEL

H. I. McKeever retired as manager of purchases, **Union Switch & Signal Div., Westinghouse Air Brake Co.**, Pittsburgh. Supervision of the purchasing department was assigned to B. W. Light, general superintendent, order, production, and material controls.

Peter W. Passaro was made purchasing agent of **Bergen County**, N. J.

Norman F. Rabe has been advanced to manager of industrial purchasing by the **Kellogg Co.**, Battle Creek, Mich. Ferris F. Purdy, purchasing supervisor, succeeds Rabe as assistant manager of industrial purchasing. Victor E. Kronmeyer has been promoted from assistant manager of grain procurement to manager of grain procurement.

H. Walton Musick has been promoted from assistant director of purchases to director of purchases, **Kerr-McGee Oil Industries, Inc.**, Oklahoma City, Okla.

Rex J. Burns has been moved up to purchasing agent for the **Chesapeake & Ohio Railroad** at Cleveland. He had been assistant general purchasing agent. Edward S. Garnett was advanced from assistant to general purchasing agent to senior assistant purchasing agent.

W. B. Burnett retired as purchasing agent at **Imperial-Eastman Corp.**, Chicago, after 41 years' service. C. A. Browne, former superintendent of plant engineering and construction, succeeds him. Burnett is a former president of the Chicago Purchasing Agents Assn., 1948-49.

Obituaries

Robert R. Leslie, purchasing agent for **Hartwell Bros.**, Memphis, Tenn., died Dec. 29. He was 61.

C. Alonzo Craig, purchasing agent for **Dow Chemical Co.**, Houston, died Jan. 3. He was 60.

New name, new methods and equipment, new low rates, and a new company-wide spirit! That's REA Express—ready, eager and able to provide you with its many services.

REA Express is the national and world-wide rail-air-sea-highway service of Railway Express . . . the simplest way to ship. You deal with just one carrier—REA—all the way from origin to destination.

You can ship anything, anywhere, any time via the REA network of domestic and inter-

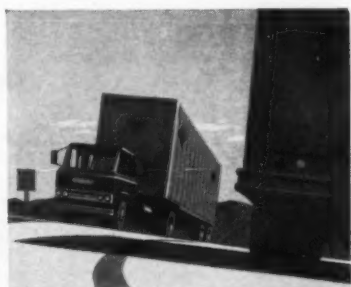
national surface and air services. Nationwide coverage to 23,000 communities in the U.S. No charge for door-to-door delivery (within published limits).

New low express rates are in effect on many, many commodities. Now you can ship at rates that are comparable to—in many cases lower than—rates via parcel post and other so-called "low-cost" carriers.

Service? No other organization can match REA—it's complete!



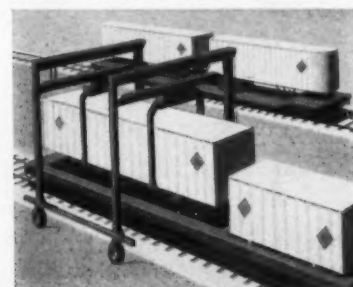
Multimillion-dollar modernization. This new "key-point" terminal is typical of REA's investment in new services and new ways to serve you better.



New over-the-road truck routes. Many new REA Express trucks supplement rail service, insure speed and frequency for intercity shippers.



New coordinated surface and air freight service enables you to combine air freight speed with fast REA pickup and delivery.



Containerized cargo handling, piggyback shipping. New REA methods minimize handling, simplify transfer, save time and costs, speed delivery.



Air Express. This priority, low-cost air service of REA and the airlines spans the U.S. with pickup and delivery by special Air Express trucks.



World-wide international services. REA customhouse brokers clear your shipment fast, speed it by air—or surface on REA's through bill of lading.

Special new low rates on these and many other commodities:

- Farm implements and parts
- Rugs and carpets
- Books and printed matter
- Shoes and other footwear
- Wearing apparel
- Automobile, truck and trailer parts
- Piece goods
- Curtains and draperies
- Sheets, towels, tablecloths
- Photographic equipment and supplies
- Hand tools

This is only a partial list applying between all points . . . call your local REA office if your commodity is not included here. If it is, call for the complete rate story—it will show you big savings.

SHIP ANYTHING · ANYWHERE
· ANYTIME VIA

R·E·A EXPRESS



RAIL · AIR · SEA · HIGHWAY



Demagnetizer

Erases Recording Tapes

Unit erases all magnetic tapes on plastic or metal reels from 5 in. to 15 in. It erases and lowers background noise level 3 db. to 6 db. below that of unused tape. It operates on ac current and will also erase 1/4-in., 1/2-in., or 16 mm. and 35 mm. sound film.

Price: \$24. **Delivery:** immediate.
Amplifier Corp. of America, 398 Broadway, New York 13, N. Y. (PW, 1/30/61)



Goggles

Allow Maximum Ventilation

Special design of plastic goggles permits maximum ventilation to prevent fogging. Flexible vinyl frames provide a snug fit and fit over personal glasses. Frames also give maximum protection from dust, chemicals, and other hazards.

Price: \$2.15. **Delivery:** immediate.
U. S. Safety Service Co., 1535 Walnut St., Kansas City 8, Mo. (PW 1/30/61)



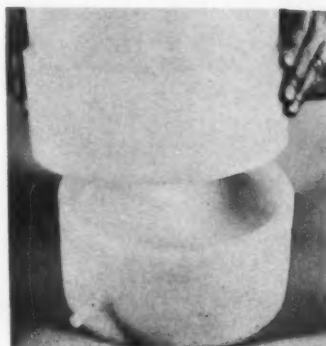
Whiteprinter

Prints at Speeds to 6 FPM

New speed control dial of rotary diazo whiteprinter enables it to print at a rate of from 4 in. per minute to 6 fpm. Three portable models take materials up to 42 in. wide. Two types of developers are available.

Price: printer: \$197.50 to \$297.50; developer: \$11.55 to \$18.80 (tube), \$119.50 to \$137.50 (rotary). **Delivery:** immediate.

Reproduction Engineering Corp., 680 Plains Rd., Essex, Conn. (PW, 1/30/61)



Two-piece Funnel

Cleans Easily

Buechner funnel has a removable filter plate section for ease of cleaning. When assembled, the sealing connection is leakproof and the funnel will withstand a 30-in. vacuum. It is made of polyethylene for service at temperatures to 230 F. Filter plate is 1-in. thick and has 1/8-in. dia. holes.

Price: \$179. **Delivery:** 1 to 10 days.
American Agile Corp., P. O. Box 168, Bedford, Ohio. (PW, 1/30/61)



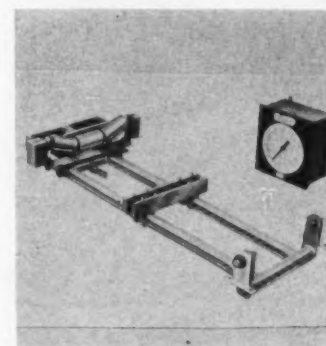
Folding Table

Increases Work Surface

Unite serves as an auxiliary table at desk side, for reference books, typing, etc. Table opens to 16 in. x 28 in. and stands 27 in. high. Tubular steel legs are finished in beige or black, and plastic laminate top in mahogany, teak, or tan linen.

Price: \$28.95 and \$22.95 (hardwood plywood top). **Delivery:** immediate.

Howe Folding Furniture, Inc., 1 Park Ave., New York 1, N. Y. (PW, 1/30/61)



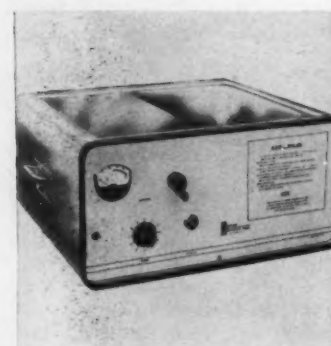
Conveyor Scale

Controls Materials Flow

Scale has wide range of weighing, measuring, metering, and controlling applications where bulk materials are transported on any type of conveyor. Full scale capacity ranges are available from 8.6 lb. to 250 lb. per foot of belt for standard models.

Price: \$2,450 (base price with circular chart recorder). **Delivery:** 4 to 6 wk.

Ramsey Engineering Co., 1853 W. County Road C, St. Paul 13, Minn. (PW, 1/30/61)

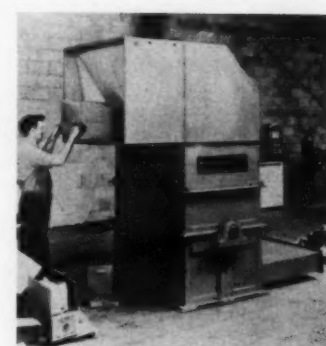


Ultrasonic Cleaner

Is Self-Contained Unit

Cleaner houses generator and tank in one-piece stainless steel cabinet. Front panel-mounted controls of the 250-w. unit include "on-off" switch (for continuous operation), "timer" (0-15 min. with automatic shut-off), tuning knob, and meter. Cleaning tank, 10 in. x 14 in. x 6 in., holds 3 gal.

Price: \$725. **Delivery:** 3 wk.
National Ultrasonic Corp., 111 Montgomery Ave., Irvington 11, N. J. (PW, 1/30/61)



Carton Shredder

Cuts Handling Costs

Shredder chops cartons into pieces from 4 in. to 12 in. and can be fed by hand or conveyor line. Force of the shredder blades propels pieces out of the shredder where they can be fed directly (or by air-flow system) to bins that feed a bailer or incinerator.

Price: \$2,000 to \$6,500. **Delivery:** 4 to 6 wk.

Mitts & Marrill, 1009 S. Water St., Saginaw, Mich. (PW, 1/30/61)

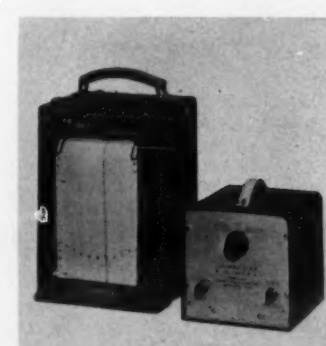


Drill Sharpener

Accommodates Wide Angle Range

Electrolytic sharpener for steel twist drills is faster than conventional grinding wheel and does not generate as much heat. It allows drill point angles from 90 deg. to 180 deg.; lip relief angles from 0-20 deg.; and helix angles from 30 deg. positive to 30 deg. negative.

Price: \$4,950. **Delivery:** 30 days.
Connecticut Special Machine, Inc., Bridge St., Winsted, Conn. (PW 1/30/61)



Recording Voltmeter

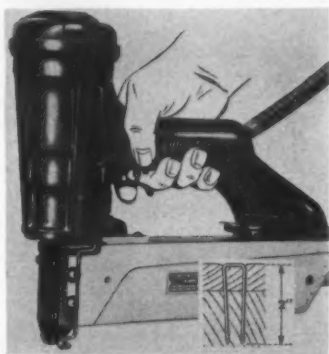
Monitors Sensitive Fluctuations

Expanded scale unit monitors voltage fluctuations even when unattended for weeks. It operates with a recorder which provides chart deflections with amplitudes 2 to 3 times greater than standard voltmeters. It is sensitive to .25-v. fluctuations in 120-v. systems and responds to a 100-millisecond pulse.

Price: \$665. **Delivery:** 3 to 4 wk.
Brenner-Fiedler Assoc., 7563 Melrose Ave., Los Angeles, Calif. (PW, 1/30/61)

New Products

Another PURCHASING WEEK service: Price and delivery data with each product description.

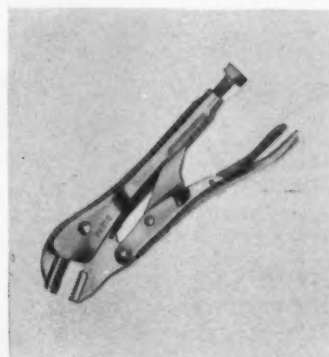


Stapler

Drives 2-in. Staples

Tool drives 16-gage, galvanized staples from 1½-in. to 2-in. long, at air pressures from 60 psi to 100 psi (depending on hardness of materials). Model has safety cap and positive magazine lock. It is used for crating and packaging.

Price: approx. \$175. Delivery: 2 wk.
Fastener Corp., 3702 River Rd., Franklin Park, Ill. (PW, 1/30/61)

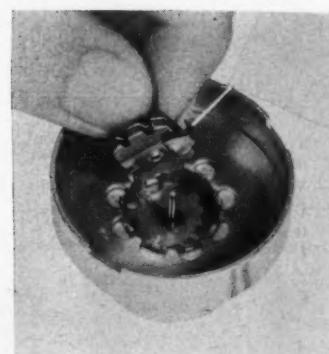


Pliers

Has Quick Grip Release

Lever-wrench plier's locked jaws exert 1-hand pressure up to a ton. Jaws can be instantly released, even under maximum pressure. The tool serves as a hand-vise, clamp, pipe wrench, and plier. Quick-release feature speeds work, particularly in clamping jobs.

Price: \$2.89. Delivery: immediate.
Proto Tool Co., 2209 Santa Fe Ave., Los Angeles 54, Calif. (PW, 1/30/61)

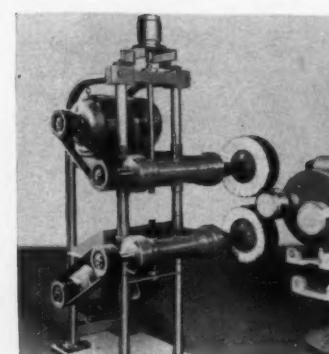


Synchronous Motor

Won't Fail on Dead Center

Permanent magnet motor has an L-shaped variable pole arm to eliminate the possibility of failing to start on dead center. Standard speeds range from 10 rpm. to 1/60 rpm. with a 20-in./oz. rating at 1 rpm. High torque rating is 40-in./oz.

Price: Under \$1.25 each (in quantities).
Delivery: 4 to 6 wk.
Lake City, Inc., Crystal Lake, Ill. (PW, 1/30/61)

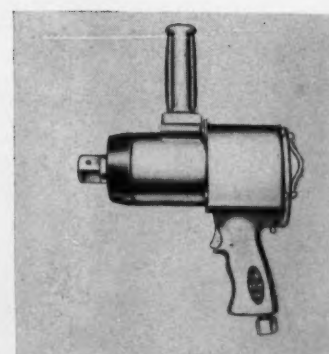


Finishing Lathe

Does Two Jobs

Metal finishing lathe has two motor-driven, spindle assemblies mounted on single base. Both wheels may be used for one job, doubling production, or one wheel for cut-down and the other for coloring, producing a finished job with only one fixturing of the part.

Price: \$1,800 to \$2,500. Delivery: 4 to 8 wk.
Murray-Way Corp., P. O. Box 180, Birmingham, Mich. (PW, 1/30/61)



Impact Wrench

Performs at High Speeds

Heavy-duty impact wrench has 1-in. sq. drive and ½-in. air inlet. Housing assures free air flow with minimum restriction to deliver rapid acceleration. Bails provide for horizontal or vertical suspension. An auxiliary adjustable handle moves to four positions. Reversing valve for right-hand operation is leakproof.

Price: \$547.50. Delivery: immediate.
Albertson & Co., Inc., Sioux City 2, Iowa (PW, 1/30/61)

This Week's

Product Perspective

JANUARY 30-FEBRUARY 5

YOUR 1965 CAR probably won't differ materially from the one you're driving now, but the same prediction won't hold true for model years coming much after that. A score of papers presented at the Society of Automotive Engineers' convention in Detroit forecast that some radical changes are in the works. Most of these developments fall into one of two classes: (1) new powerplants for existing cars and (2) new concepts in ways to move people.

• **New powerplants** will be making their debut before any "world of tomorrow" autos appear. Three new types are expected to hold especially bright promise: Wankel rotary combustion engine, the gas turbine, and the fuel cell.

• **Wankel rotary engine**, developed by NSU Werke in Germany and licensed by Curtiss-Wright in this country, has been center of controversy since it was introduced here a year and a half ago. The engine consists of a triangular rotor that turns—through off-center gearing—inside a rounded chamber. As the rotor spins, it forms three chambers that handle the intake, ignition and exhaust functions of combustion.

Reports at the SAE convention stated that experimental models had come close to conventional reciprocating engines in both performance and endurance. Road tests gave results ranging from 50 mpg. at 20 mph. to 15 mpg. at 95 mph. The reports concluded, "During the past years of development nothing showed up that indicated a barrier that could not be overcome. It appears to be only a question of research effort to designate the time at which this type of engine will be ready for production."

• **Gas turbine progress** was reported by engineers from both Ford and Chrysler. Turbines usually use cheap fuels and operate like the turbo-prop engine in planes. The fuel is burned in the combustion chamber, producing hot gases that turn the blades of a turbine attached to a drive shaft.

Ford reported that a 300 hp. gas turbine had "surpassed expectations" during a year of testing. Chrysler also noted progress in the development of the company's centrifugal compressor. This design sucks in air and squeezes it to raise the pressure and temperature before it flows into the engine's combustion chamber. Some industry experts feel that the gas turbine is ready for passenger car use, but as yet no one has been willing to take the expensive gamble to find out. Truck uses will probably come first.

• **The fuel cell**, although still some years away, will probably have more impact on car design than any other new powerplant. Fuel cells are in effect a type of battery. Chemicals are fed continuously to the cell, where they react producing electricity and a chemical by-product.

Hydrogen-oxygen (or hydrogen and air) fuel cell is the most advanced of the hundreds of types under development. The principles are pretty well understood, and since water is produced as the reactive product, by-product elimination is no problem. Low temperature cells operating at atmospheric pressure have been run at low rates for thousands of hours—at over-all efficiencies up to 80%. This means that doubled or trebled improvement will make the cell competitive with a diesel engine on a power output per unit weight basis. But it still has a long way to go to compete with the gasoline engine in this area.

Direct-burning hydrocarbon-air cells are still in the early lab stage, but good efficiency has been claimed in high temperature cells. Several chemical problems must be solved before this type of fuel is ready for its commercial use.

• **Since the fuel cell produces electricity it would in effect signal the return of the electric car.** Although several battery makers have been promoting electric autos and pickup trucks for several years, results have been far from promising. The fuel cell would provide the needed shot-in-the-arm.

One designer, Brooks Stevens, has gone so far as to design a complete automobile based on fuel cell power. He throws conventional ideas out the window to come up with a car that "will be an orderly bin of comfortable dimensions with a completely flat floor pan allowing for six individually operated bucket seats."

Stevens picks a 110 in. wheelbase with individually sprung wheels. Short functional quarterpanels are used to enclose the passengers. These are designed as "identical stampings, or moldings, or diecastings—whatever may be the order of the day—in steel, aluminum, magnesium or fiberglass, or a yet unknown material."

Next week's Product Perspective will take a look at some "new ways to move people."

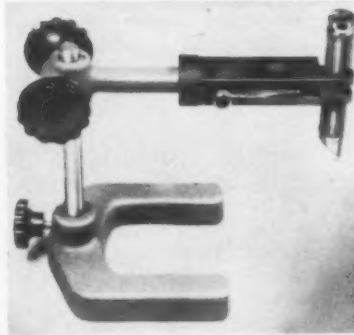


Lighting Tool

Removes Fluorescent Tubes

Tool's handle locks at any length to eliminate ladders when removing fluorescent tubes. Models are available for 14-ft. and 18-ft. ceilings. Clips in the cross-arm secure the tube. Pressure exerted on the handle releases it from the fixture socket.

Price: \$9.95. Delivery: immediate.
Parkraft Mfg. Co., 3047 4th Ave. S.,
Minneapolis 8, Minn. (PW, 1/30/61)



Microscope

Measures to 1/1000 in.

Instrument's reticle is calibrated to measure 1/10 in by .001-in. divisions. It has a rack and pinion focusing with a 7-in. rack. Arm is 8 in. long and the base can be adjusted through a full 360 degrees. The microscope can be removed for use as a pocket instrument. Finish is grey crinkle.

Price: \$19.75. Delivery: immediate.
Edmund Scientific Co., Barrington, N.J.
(PW, 1/30/61)

GE Introduces New Line Of Two-Way Car Radios Designed to Fit Compacts

Lynchburg, Va., — General Electric has introduced a new line of compact, two-way radios that give more power (15 watts) with less battery drain than their 10-w. predecessors. The mobile radio, now in production, will sell for \$419.

Aid to Small Firms

Kent J. Worthen, GE's national manager of mobile radio sales said, "the new 'Pacer' will be a boon for small local companies where price is important



THE PACER: GE's new two-way radio saves drain on battery, was designed especially with the compact's limited space in mind.

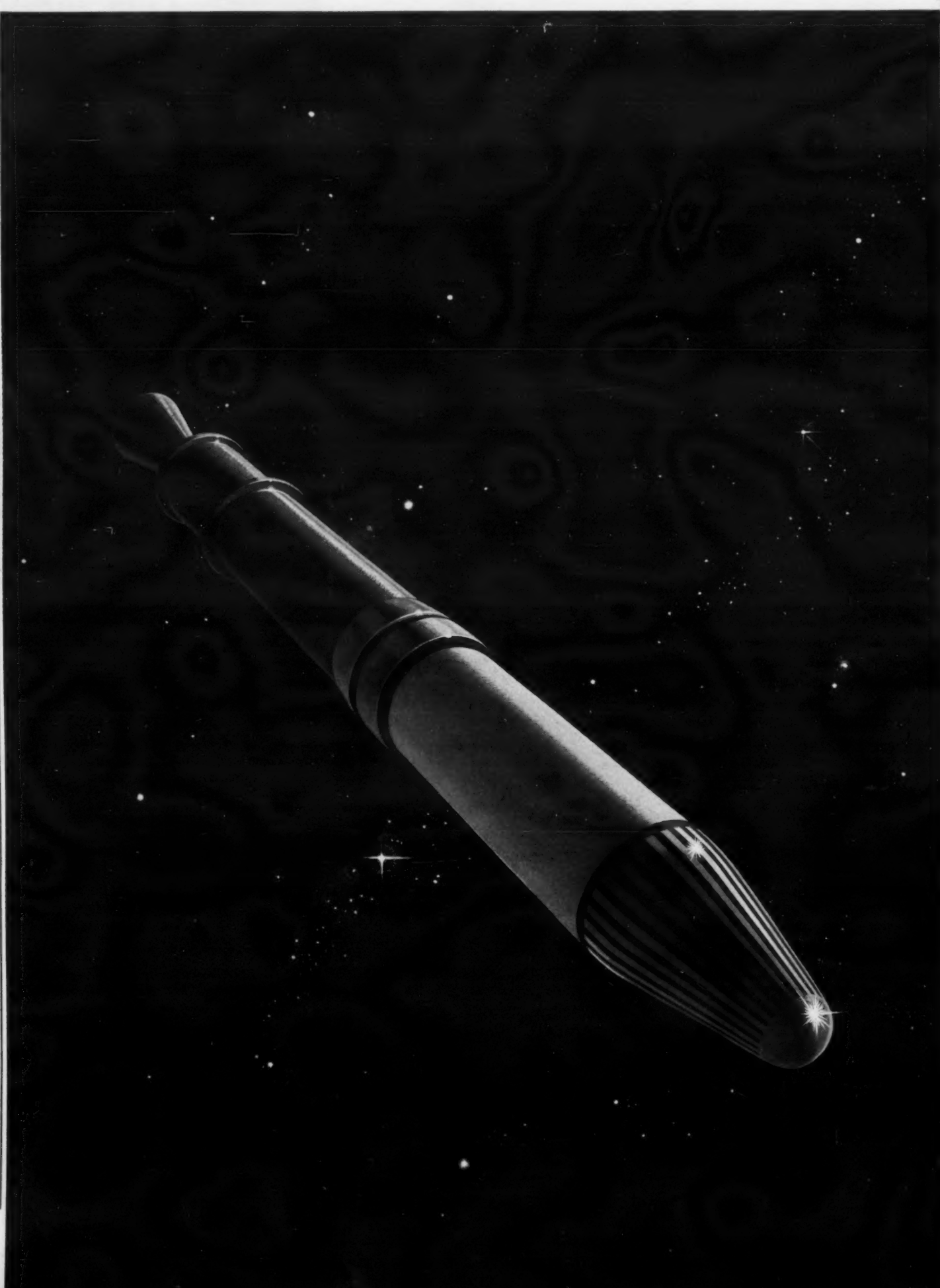
and for large manufacturers where the savings per unit can effect substantial economies on large fleet purchases.

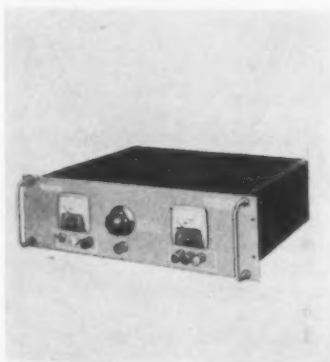
The Pacer is designed for operation in low band (27 mc. to 50 mc.) and high band (150 mc. to 174 mc.) and has full-quality VHF-FM audio. It has 15 vacuum tubes and two transistors. When "on," battery drain is 4.2 amp., a full ampere less than 10-w. tubed units.

Transistorized Power Supply

The control section contains a transistorized power supply adaptable to 12-v. negative or positive ground electrical systems. This eliminates vibrators, a major maintenance problem, and contributes to greater reliability. A new filter in the receiver lowers susceptibility to ignition noise, producing quieter communications with better voice quality.

The Pacer, which includes a built-in speaker, is 4¼ in. high, 7-¾ in. wide, and 12½ in. long. It was designed with installation in compact cars in mind—to fit under the dash without cramping passengers.





Power Supply

Delivers 36 v.

Voltage regulated power supply delivers 9-36 v. d.c., 0-10 amp., 0.1% regulation. It is available without meters and also with 0.01% regulation. It features continuous variable output voltage control, and has inherent overload protection.

Price: \$625, \$825 (with 0.01% regulation). **Delivery:** 30 to 60 days.

Keeco, Inc., 131-38 Sanford Ave., Flushing 55, N. Y. (PW 1/30/61)



Respirator

Filters Sprays and Vapors

Mask protects against sprays and fumes of enamels, lacquers, and lead-based paints. Chemical cartridges have pre-filters to catch paint droplets and inner units to filter vapors. Seventeen types of cartridges protect against a wide range of hazards.

Price: approx. \$7.50. **Delivery:** immediate.

American Optical Co., Safety Products Div., Southbridge, Mass. (PW 1/30/61)

395 MILLION MILES AGO

... Republic Stainless Steel
flashed into the Van Allen belts
with Explorer I

On January 31, 1958, at 10:48 PM, EST, America's first satellite was hurled into orbit from Cape Canaveral, Florida, by the U.S. Army. Explorer I is still orbiting. It has produced the most important space discovery to date—the Van Allen belts of radiation.

Explorer I's nose cone was fabricated from Republic Stainless Steel, Type 430, by the Lodge and Shipley Company, Cincinnati, Ohio. They used the Floturn Process to produce specified deviations in wall thickness.

Much has happened at Republic Steel since the launching of Explorer I. Republic has the *largest capacity for production* of vacuum melted metals . . . is the *largest producer* of steel for cold extrusion and cold heading . . . the *only source* for complete line of stainless sheets up to 60" wide . . . a *new source* for complete line of PH Stainless Steels.

Today—three years later—Republic continues to be the world's largest producer of stainless and alloy steels.



REPUBLIC STEEL

Cleveland 1, Ohio

World's Leading Producer
of Space Age Metals



Strong, Modern, Dependable

ASA Publishes New Specs For Grinding Wheels

New York—The American Standards Assn. has published a set of specifications for industrial grinding wheels, classifying them according to 12 end-use categories.

An association spokesman noted, "The standards have been prepared to help the purchasing agent and the manufacturer know what each other is talking about in the ordering of grinding wheels."

The new ASA publication, "American Standard Specifications for Standard Shapes and Sizes of Grinding Wheels, B74.2-1960," was prepared in cooperation with the Grinding Wheel Institute, of Cleveland. Copies may be obtained from the institute.

The institute announced that the publication "supplements and replaces" the prior "Standard Shapes and Sizes of Grinding Wheels, Simplified Practice Recommendations, R45-57." This is a publication of the U. S. Dept. of Commerce.

The new specification booklet does not attempt to cover more specialized abrasive wheels, such as diamond wheels and abrasive discs. Interested readers may refer, however, to the 1957 ASA publication, "American Standard Identification Code for Diamond Wheel Shapes." The association spokesman indicated that more comprehensive standards for diamond wheels, comparable to the grinding wheel specifications, may soon be approved.

The end-use categories on which these specifications are based consist of: cutting off; cylindrical grinding, between center; cylindrical grinding, centerless; internal grinding; offhand grinding on periphery of wheel; saw gumming; snagging, floor stand; snagging, portable grinders; snagging, swing frame; surface grinding, horizontal spindle machines; surface grinding, vertical spindle machines; and tool grinding, broaches, cutters, mills, reamers, taps, etc.

Board Changes Timing

Kettering, Ohio—The Board of Education has switched the timing of order placement from summer to late winter to take advantage of off-season prices and get faster deliveries.

Asst. Supt. J. T. Lucas said that another advantage of the switch will be that school personnel will be available for distribution of the supplies

Your Guide to New Products



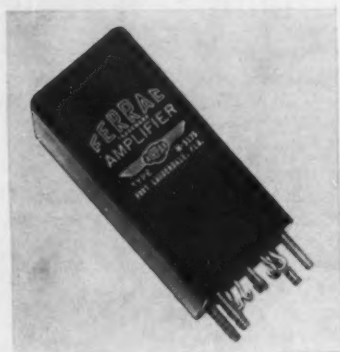
Window Sheeting

Stops Glare and Heat

Vinyl sheeting in a variety of colors and white cuts glare. Three colors absorb heat as well as glare. To apply, the window is moistened and a custom-cut sheet pressed against it. Excess water is pressed out. It is washable and may be stripped off and stored for re-use.

Price: 25¢/sq. ft. (100 sq. ft. and over). **Delivery:** 1 wk.

Transeal, Ltd., 902 North Ave., Plainfield, N. J. (PW, 1/30/61)



Magnetic Amplifier

Delivers ± 7.5 V. d.c.

Unit delivers linear output voltage of at least ± 7.5 v. d.c. into a 1,000 ohm load with signal levels in the mv. range. Power is 115 v. RMS at 400 cps. Operating temperature range is -55°C to $+85^{\circ}\text{C}$. It withstands 30 G shock and 10 G vibration.

Price: \$148. **Delivery:** 1 to 3 wk. **Airpax Electronics, Inc., Seminole Div., Fort Lauderdale, Fla. (PW, 1/30/61)**



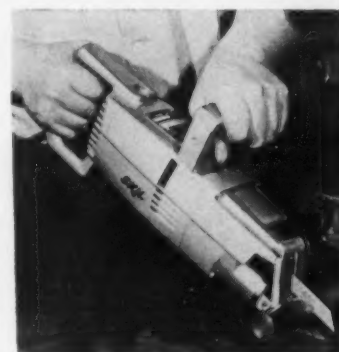
Carton Shredder

Needs No Special Mounting

Unit with feed conveyor reduces cardboard boxes and other paper packing material to small shreds. It needs no special mounting or foundation. Ripper teeth operate at a minimum noise level, require no sharpening or adjustment, and do not mesh with other teeth.

Price: Approx. \$8,700. **Delivery:** 6 to 8 wk.

Blower Application Co., 3361 N. 35th St., Milwaukee 16, Wis. (PW, 1/30/61)

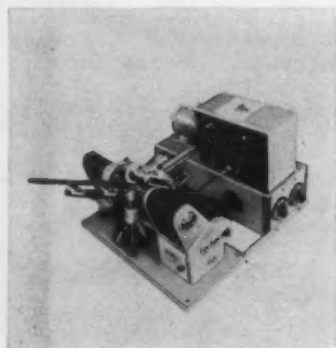


Reciprocating Saw

Cuts All Metals

Saw delivers 2 speeds: 1,000 strokes/min. for stainless steel, other hard alloys, cast iron, and hard abrasives; 1,400 for mild steels and nonferrous metals. It makes a clean, burr-free cut on 1-in. steel bar stock in 23 sec. Standard equipment includes 4 blades and an all-steel carrying case.

Price: \$124.50. **Delivery:** immediate. **Skil Corp., 5033 Elston Ave., Chicago 30, Ill. (PW, 1/30/61)**

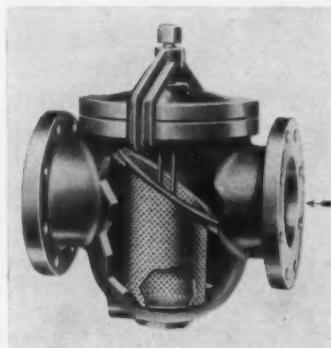


Resistor Grinder

Produces Carbon and Metal Film Units

Spiral grinding machine produces carbon and metal film resistors from $\frac{1}{8}$ w. miniatures to 2 w. It produces resistors at high speed with dia. ranging from $\frac{1}{16}$ in. to $\frac{3}{8}$ in. and in lengths from $\frac{1}{8}$ in. to 2 in. Rates depend on number of spirals to be ground for each resistor.

Price: \$3,000. **Delivery:** 60 days. **Assoc. American Winding Machinery, 750 St. Ann's Ave., New York, N. Y. (PW, 1/30/61)**

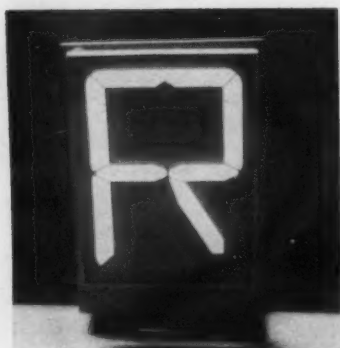


Basket Strainer

Protects Pumps and Valves

Strainer protects valves, pumps, and regulators in most suction and high and low pressure installations. Sizes range from 2 in. to 16 in. Strainers are semi-steel and cast steel, and baskets are brass or stainless steel with $\frac{1}{8}$ in. perforations.

Price: \$51 (2-in. pipe) to \$1,620 (16-in. pipe). **Delivery:** 1 to 2 wk. **Strong, 509 Sandusky St., Conneaut, Ohio. (PW, 1/30/61)**



Readout

Can Be Read at 150 Ft.

Lamp displays letters and numbers by electroluminescence. It is $3\frac{1}{8}$ in. wide x $4\frac{3}{4}$ in. high displays a maximum size number or figure of $2\frac{3}{8}$ in. x 4 in. which can be read at 150 ft. The readout operates at 240 v. or 460 v., and 60 cps. or 400 cps. Color of the light is highly visible green.

Price: \$25. **Delivery:** immediate. **Westinghouse Lamp Div., MacArthur Ave., Bloomfield, N. J. (PW, 1/30/61)**

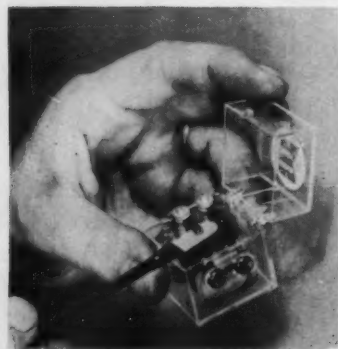


Ram Bender

Takes up to 2-in. Pipe

Tool bends up to 2 in. steam and gas pipes, extra-heavy pipe and heavy wall tubes. It develops 8-ton thrust at 6,000 psi. Standard tools include $\frac{1}{2}$ in., $\frac{3}{4}$ in., 1 in., $1\frac{1}{4}$ in., $1\frac{1}{2}$ in., and 2 in. Weight of tools and case is 135 lb. Bender is available also with tube and flat bar dies.

Price: \$287.50. **Delivery:** 1 to 2 wk. **Wallace Supplies Mfg. Co., 1304 W. Diversey Pkwy., Chicago, Ill. (PW, 1/30/61)**



Diamond Spatula

Cleans Contact Points

Diamond particles imbedded in the metal base of spatula clean contact points on relays. Nylon shafts are flexible and insulate against electrical shock. Two spatula types with double diamond faces 55 mm./100 mm. thick come in 200 and 300 grain sizes. A single face, 25 mm./100 mm. thick, has a 400 grain.

Price: \$4.95. **Delivery:** immediate. **Jonard International Corp., 624 Madison Ave., New York 22, N. Y. (PW, 1/30/61)**

Purchasing Week Definition

Standard Paper Sizes

| | | | |
|--------------------------|-----------------|------------------|-----------------|
| Folio note..... | 5½ in. x 8½ in. | Denny..... | 16 in. x 21 in. |
| Pocket note..... | 6 in. x 9½ in. | Folio..... | 17 in. x 22 in. |
| U. S. government writing | 8 in. x 10½ in. | Royal..... | 19 in. x 24 in. |
| Commercial writing... | 8½ in. x 11 in. | Super Royal..... | 20 in. x 28 in. |
| Legal cap..... | 8½ in. x 14 in. | Elephant..... | 23 in. x 28 in. |
| Foolscap..... | 13 in. x 16 in. | Imperial..... | 23 in. x 31 in. |

(PW, 1/30/61)

Receiving procedures can create problems for purchasing men, and one of the most vital has to do with centralization vs. decentralization. Should you have an entire order shipped directly to your main plant and then arrange for transportation of parts of it to each of your branches as needed? Or would it be more economical to have the supplier ship directly to the branch plants?

PURCHASING WEEK's School for Strategists takes up this problem in the operations research games presented at the current sitting. These games, prepared by Martin L. Leibowitz, can be solved by this simple step-by-step procedure:

- (1) Decide what you are trying to do (elementary, but sometimes the goal gets lost in the maze of complicating factors).
- (2) Amass all the available data on the problem.
- (3) Arrange your data in an orderly fashion.
- (4) Determine how many variables in the situation work on each other.
- (5) List alternate courses of action.
- (6) Formulate a mathematical sequence of your problem (not so tough as it sounds).

Sample Problem

You're the Purchasing Agent for the Sputter Missile Co. You're seeking bids on a certain type of material, and you know that the more bids you receive, the better price you'll get from vendors competing hotly for your order. But at the same time, it costs about \$200 to process each bid. Therefore, the more bids, the higher will be the processing cost.

So your problem is this: How many bids should you seek to effect your greatest saving?

Now here's how the step-by-step procedure would work in solving this problem:

- (1) **What are you trying to do?** You're trying to decide how many bids you should ask for in order to effect the greatest possible saving.
- (2) **What data do you have?** You know that it costs you \$200 to process each bid. You know, too, that if you invite only one bid, you'll be at the vendor's mercy—he'll set the price. But if competition rears its head, you'll get a better price. So by amassing all the price data you can get, you come up with these estimates of savings: \$500 if two vendors bid; \$850 if three bid; \$1,100 if four bid; \$1,200 if five bid; \$1,300 if six bid.
- (3) **Arrange this data in an orderly fashion.**

| Bids Solicited | Savings |
|----------------|---------|
| 1 | 0 |
| 2 | \$500 |
| 3 | \$850 |
| 4 | \$1,100 |
| 5 | \$1,200 |
| 6 | \$1,300 |

- (4) **Now what are the variables?** They are: the number of bids, the amount of the savings, and the cost of processing. How do they work on each other? As the number of bids increases, so does the amount of money saved—and so does the cost of processing the bids.

- (5) **What are your alternate courses of action?** In this case, they are the number of bids you can ask.

- (6) **Now, formulate your mathematical sequence.** You've already done part of this in Step 3; what you have to do now is add two more columns—one listing the cost per bid and the other giving the net savings, i.e., Column 3 subtracted from Column 2. Like this:

| Number of bids Asked | Savings on Purchase Price | Cost of Processing | Net Saving to Firm |
|----------------------|---------------------------|--------------------|--------------------|
| 1 | 0 | \$200 | -\$200 |
| 2 | \$500 | \$400 | \$100 |
| 3 | \$850 | \$600 | \$250 |
| 4 | \$1,100 | \$800 | \$300* |
| 5 | \$1,200 | \$1,000 | \$200 |
| 6 | \$1,300 | \$1,200 | \$100 |

And there's your answer (starred). You should solicit four bids because that's your point of greatest net savings, \$300 (\$1,100 savings on material less the \$800 cost of processing). If you solicit fewer or more bids, the cost of processing them will eat up more of the material savings and give you a smaller net.

Now, try the two following problems on your own.

Receiving Problem I

Frank is in charge of procuring Screwtapes for the GHF Co. which uses them in its manufacturing processes at two branch plants. The standard procedure has been to have suppliers deliver the Screwtapes to GHF's Main Plant. The Screwtapes then are delivered by GHF's own transportation to the branch plants.

But Frank has been learning about the "hidden costs" involved in such use of the company's transportation facilities, and he now questions the desirability of continuing centralized procurement of Screwtapes.

To substantiate his suspicions, Frank made a study and collected the following information:

- Screwtape requirements at Branch Plant I are 200 units.
- Screwtape requirement at Branch Plant II are 300 units.
- GHF's transportation cost from Main Plant to Branch Plant I is \$1.00 per unit.
- GHF's transportation cost from Main Plant to Branch Plant II is \$1.50 per unit.
- Supplier's handling charge for each shipping order amounts to \$200 regardless of the size of the order.
- Supplier's shipping charge to Main Plant: \$4.00 per unit.
- Supplier's shipping charge to Branch Plant I: \$6.00 per unit.
- Supplier's shipping charge to Branch Plant II: \$3.50 per unit.

Then Frank went ahead and computed the total transportation costs for the completely centralized receipt policy:

| | |
|--|-------|
| Handling charge for order of 500 units..... | \$200 |
| Supplier's shipping charge to Main Plant (500 x \$4.00)..... | 2,000 |
| Transport of 200 units from Main Plant to Branch Plant I (200 x \$1.00) 200 | |
| Transport of 300 units from Main Plant to Branch Plant II (300 x \$1.50) 450 | |

Total cost of centralized receipt procedure.....\$2,850

In addition to this centralized procedure, Frank reasoned that there were three alternate ways to handle Screwtape shipments:

- 1.) Supplier could ship directly to both branch plants.
- 2.) Supplier could ship directly to Branch Plant I, but continue to send the Branch Plant II order to the Main Plant.
- 3.) Supplier could ship directly to Branch Plant II, but continue to send the Branch Plant I order to the Main Plant.

To aid in computing the costs associated with each of the above procedures, Frank prepared the following table:

| Order For | No. of Units | Route | Handling Cost | First Leg Cost | Second Leg Cost | Transport Cost |
|----------------------|--------------|--------------------------------|---------------|----------------|-----------------|----------------|
| Branch Plant I..... | 200 | Supplier to Main to Branch I | \$200 | \$800 | \$200 | \$1,200 |
| Branch Plant I..... | 200 | Supplier I direct to Branch I | \$200 | 1200 | 0 | 1,400 |
| Branch Plant II..... | 300 | Supplier to Main to Branch II | \$200 | 1200 | 450 | 1,850 |
| Branch Plant II..... | 300 | Supplier I direct to Branch II | 200 | 1050 | 0 | 1,250 |

By using the above table, Frank readily found the cost of the first alternate procedure (supplier ships directly to both branch plants) to be \$1,400 plus \$1,250 equals \$2,650.

What costs are incurred by the second and third alternate procedures, and which procedure did Frank recommend?

(Answer on Page 24)

Receiving Problem II

Frank's recommendations regarding the best Screwtape receipt procedures in Problem I were accepted by GHF and put into force. But now a new supplier, Electronic Tapes, Inc., has begun to market Screwtapes, and Frank wants to see whether this new source can improve his receipt procedure.

So Frank contacts Electronic Tapes and discovers that their price is \$1.25 per unit higher than that of the present supplier, Standard Mfg. Co. Nonetheless, he requests and obtains the following data on Electronic Tapes' shipping charges:

- Electronic's handling charge for each shipping order: \$200
- Shipping charge to Main Plant: \$4.00 per unit.
- Shipping charge to Branch Plant I: \$3.00 per unit.
- Shipping charge to Branch Plant II: \$5.00 per unit.

Comparing these charges with those for Standard, Frank sees that the only possible saving in shipping expense would be in having Electronic ship directly to Branch Plant I. The basic question was: Is the transportation savings worth the extra price?

How did Frank answer this question, and what changes, if any, did he recommend in the Screwtape procurement procedure?

(Answer on Page 24)

New Products to Help Maintenance Features Annual Plant Engineering Show in Chicago

(Continued from page 1)

the newer materials, such as epoxies and plastics, as well as the latest in maintenance products.

Kenneth N. Banthin, plant engineer for Visking Div., Union Carbide, one of the speakers at the PM&E conference, pinpointed some of the most vital areas for the P.A. who wants to stay abreast of the latest developments:

• **Roofs.** New materials for roof repair include plastic fabric and screen. Fiber glass fabric with tear strength many times that of felt should be considered for use with asphalt, pitch or other binders. Plastic screen can serve the same purpose in expansion joints.

Special cold-application mixtures and blends of asphalt, synthetic rubber, silicones, and plastics can be used on the cleaned roof to resaturate the top layers of felt and provide a new weather-proof surface. These materials also can be sprayed on hot, but this usually calls for a contractor with special equipment.

A combination of asphalt and chopped glass roving is sprayed over old roofing. Three men can roof 15,000 to 18,000 sq. ft. a day with this method—as contrasted to the five men needed to put down 8,000 sq. ft. of conventional multilayer roofing.

• **Windows.** Plastic windows cut future maintenance and cost less initially under many conditions. Polyester fiber-

glass sheets show no tendency to crack at impacts several times stronger than a glass pane can take. The plastic windows diffuse the light, and integral color makes painting unnecessary. Sheets are easily cut with ordinary shop tools.

If transparency must be retained, acrylic plastics may be a good bet. Initial cost for a 1/8-in. sheet will run about 20% higher than double-strength glass.

• **Exterior walls.** Here combinations are the rule. Liquid polysulfide-epoxy mixture makes a strong, flexible, non-shrinking concrete adhesive which creates a bond between new and old concrete that is stronger than the portland cement itself. Caulking materials compounded with butyl and other synthetic elastomers remain elastic and weather resistant considerably longer than older oleo resinous materials.

Coating produced by adding acrylic resins to water base vehicles are firmly established as coatings for concrete, cinder block, stucco, and masonry. One coat usually does the job and lets vapor in the wall pass through, yet keeps moisture out.

• **Floors.** New, ultra-strong materials are needed to withstand abrasion of modern mechanical handling equipment. Latex modified portland cement mixture patches concrete, wood or steel floors.

Answers to Problems on Page 23

Answer to Problem I

The second alternate procedure costs \$3,250 (\$1,400 plus \$1,850). And the third alternate procedure runs \$2,450 (\$1,250 plus \$1,200).

Since the third alternate involved the lowest cost, Frank recommended that this procedure be followed, i.e., the Supplier should ship directly to Branch Plant II, but the Branch Plant I order should be sent via the Main Plant.

Answer to Problem II

First, Frank calculated the transport cost involved in having Electronic ship 200 units directly to Branch Plant I. This was simply the handling charge (\$200) plus actual shipping cost ($200 \times \$3.00 = \600) or a sum of \$800. To this he added the additional purchasing cost of \$250 resulting from buying the 200 units at \$1.25 above the present rate. In this manner he obtained the over-all relative cost, \$1,050, associated with having Electronic take over the Branch Plant I order.

Frank then went back to the table of the previous problem and noted that the company was paying \$1,200 in transportation charges to have Standard take care of the Branch Plant I order.

Frank therefore decided that Electronic's lower transport charges were well worth the higher price, and he recommended that Electronic be given the Branch Plant I orders.

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Consultants to Probe Top News Headlines In Purchasing Week

(Continued from page 1)

ganization, and theory. A former president of the National Assn. of Purchasing Agents and Shipman Medal Winner, he was vice-president for Purchasing & Materials for Bigelow-Sanford, a member of the War Production Board, and is a longtime lecturer, consultant, and author in the field of purchasing.

Robert C. Kelley will comment on purchasing practice. Until recently he was director of Purchases for Dresser Industries; before that, he held similar positions with Food Machinery Corp., Basic Magnesium, and various rubber companies. He has taught purchasing at Northeastern University, Southern Methodist, and MIT, and long has been active in the National Assn. of Purchasing Agents.

Sydney Prerau's fields are law, taxes, insurance, and contracts. He is a director of the J. K. Lasser Tax Institute, and author of *Your Income Tax*, *Business Tax Techniques*, *Executives' Guide to Business Procedures*, and PURCHASING WEEK's column "The Law and You."

Martin L. Leibowitz specializes in operations-research techniques, electronic data systems, and communications theory. He is Assistant Director of the Systems Research Group, has done operations research at Stanford Institute, and worked on missile mathematics for the Convair Division of General Dynamics. He is the author of the operations research games in PURCHASING WEEK's "School for Strategists" feature.

John M. Owen, Jr.'s basic fields are inventory control, price trends, and general purchasing theory. Currently he is a faculty member of the Graduate School of Business Administration at Wagner College. Previously he was an economist for the Econometric Institute and a commodity and research analyst for Western Electric. The Strategy Games in PURCHASING WEEK's "School for Strategists" are devised by him.

Furniture Makers Plead Innocent

Buffalo, N. Y.—Eight manufacturers of metal office furniture have pleaded innocent to federal charges they conspired to fix prices to eliminate competition.

Federal antitrust attorney Raymond M. Carlson revealed after the arraignment that the government's case against the companies will not be ready for trial for at least two months.

Professional Perspective



CONSULTANT F. ALBERT HAYES

Interprets This Headline

From P/W's Jan. 16 and 23 Issues

'How You Can Order Scientifically'

In our growing role as management men, we purchasing people are going to have some new and shattering experiences—particularly with financial experts—during these days of depressed corporate profits. Here's one typical incident that occurs over and over again:

• Let's say your company uses \$5,000 worth of switches in some specific time period. During this same period you buy \$6,000 worth of replenishment—slightly more than you actually use; but in your judgment you need some safety stock and some carryover into the next time period. In calculating how rapidly your inventory is turning over, you take half your purchases (\$3,000), divide them into usage (\$5,000), and come out with turnover for that month roughly 1.7. To your way of thinking this is a pretty good piece of reckoning, covering just about every turn of fate.

• Now the accountants get hold of your figures—and you're in for it. This is not how they see the situation. They take your inventory at the end of the month (\$3,000) plus whatever stock you had on hand (say \$4,000), making a total of maybe \$7,000, and they divide this into the \$5,000 and come up with a turnover rate of a mere 0.7.

The difference between the two rates—your 1.7 and the accountants' 0.7—is enormous. One of you has to do some explaining to the boss. Most likely it's you. Because this sort of cross-thinking has been going on for months now, it is a wonder more purchasing people haven't cracked up. The word "inventory" may yet get into our psychiatric language.

"How You Can Order Scientifically"—the PURCHASING WEEK headline on which I have been asked to elaborate—holds one clue to sanity. Specifically, it applies to a series of calculations which tells you the correct order-size for many of the items you buy. It's Economic Order Value method of buying translated into actual figures (printed in PURCHASING WEEK on Jan. 16 and 23).

Now let me put this study—in which I had a guiding hand—into still broader focus. To the concept "scientific" I would like to add the concept "sophisticated". The addition brings a point of view like this:

• For one thing I don't think any amount of talking or mathematics is going to keep management from prodding you to hold inventories to the bare bone for a long time to come. We are in an era of extremely strict housekeeping.

• Next, no P.A. is going to do his job intelligently or safely if he doesn't arm himself with all the formulas and experience he can lay his hands on. If you can't cope with the accountants' argument I cited above, you are undermining your job.

• Third, you must do more than accumulate ammunition on a helter-skelter basis. You have got to use it correctly.

On this last score, experience with American Management Assn. seminars, and a recent trip to the Mideast under Government auspices, prompts me to remind you:

1) Be sure your department has a charter. That is, you should have a written manual defining your status and operating procedures to your colleagues and your suppliers.

2) Get to know your inventory as intimately as a marine knows his rifle. You'll find that your stock usually consists of three broad categories. At the one extreme will be large-value items which numerically may be a small part of the dollar, but a major part of the dollars spent. These you usually buy only after considerable deliberation and negotiation. At the other extreme, you'll find items of small dollar value and small dollar use. These you usually stock on the "two bin" method. That is, when bin No. 2 is used up you replace it (bin No. 1 is kept in reserve).

Down the middle is a huge area consisting of items repetitively used, and requiring a big outlay in dollars, time, and storage. These are the ones you should buy with the aid of checks and formulas—that is, the Economic Order Value method.

3) This is the problem of stockouts. While formulas—such as the "min-max" concept—can guide you here, you'll find that management risks in judgment are just as big a consideration. In any event plot your course thoroughly before you embark on it.

4) Be sure the items you buy on economic order value method really lend themselves to such treatment. Here's a simple, common-sense test:

Take five of the repetitive purchases you make. Select those that are appropriate to the EOY concept—those that are regularly used in predictable quantities, which are fairly stable in price, which are not too vulnerable to obsolescence or shelf deterioration. Every inventory contains many of these components.

Then compare the quantities you have been buying for each of these items with the proper EOY quantity. Note the penalty for each (from the tables), and the total for all five. This is what NOT having an EOY program is costing you. The total probably will be formidable. See for yourself, using the following table:

| Item | Monthly Usage | Your Usual Order Quantity | Proper EOY | Penalty Per Month For Not Using EOY |
|------|---------------|---------------------------|------------|-------------------------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |

Total (How much you can save per month on just five items)...

P.A. Brutality Evokes Screams From Salesmen

(Continued from page 1)
cited an example of how he obtained a 10% reduction on corrugated boxboard where the best he could get previously was 4% to 5%.

• Salesmen complain that one of their biggest headaches is "piddling small orders" and a shift from long-term or contract buying to spot purchases. For instance: In Des Moines; a purchasing executive who says "there are plenty of sources, and price and quality rate one-two" reports he has cut the size of his purchases by as much as one third—but he's ordering twice as often.

• Requests for "unrealistic" delivery has many sales executives grouching at P.A. buying tactics. A Detroit industrial fastener sales manager cited the example of a buyer who ordered 25 special studs. "The purchasing agent insisted on having 10 delivered in January, 10 in February, and 5 in March," he said. "The whole order amounted to less than \$50—and look at the time and paperwork we have to devote to that order."

Some Particularly Bitter

Some sales chiefs in major production centers are particularly bitter about the price tactics of some purchasing men who, they feel, are riding the fence on ethics in some of their price demands.

The marketing director of a Los Angeles electronics producer, complaining that P.A.'s play one salesman against the other, said he objects to "deliberate fabrication" of stories to obtain price concessions.

A Cleveland producer of industrial handling equipment said their salesmen are forced to deal with buyers who, they know, are "definitely playing off one supplier against another to achieve their ends." "Fictitious competitors" also have aroused the ire of some Boston area manufacturers.

Steel producers also are complaining about customers who are filing "ridiculous and exaggerated claims" for refunds for defects allegedly discovered in high quality items after their delivery.

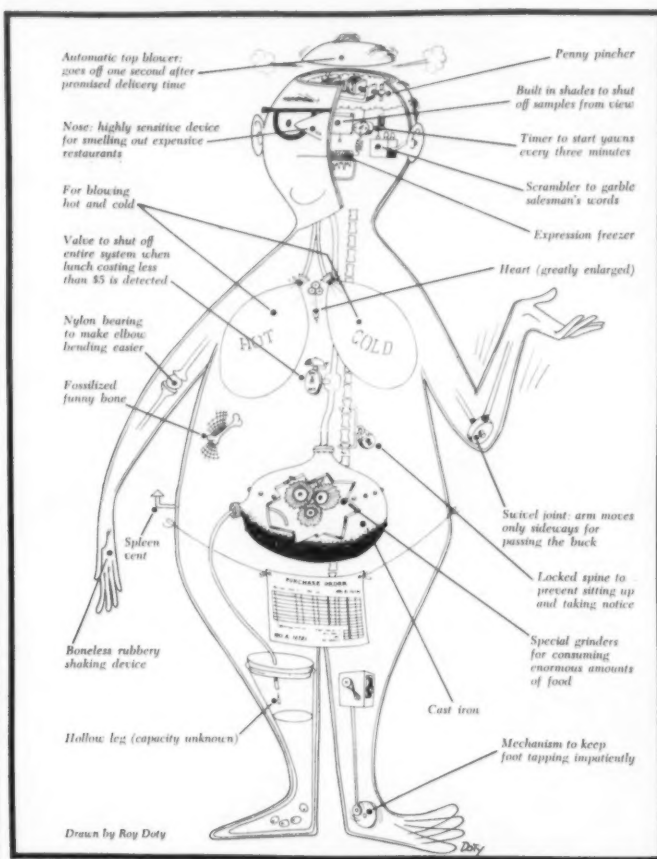
Not All Brickbats

But all is not brickbats between purchasing executives and salesmen—there's a brighter side to the picture. A PURCHASING WEEK survey of both sales and purchasing "gripes" showed that on the whole sales departments realize the assignment industrial buyers are trying to lick and are trying to adjust to the sticky situation.

"Salesmen are our best friends," said the purchasing executive of an Eastern specialty steel producer. "We lean heavily on them for help, information on products and services, gossip of the industry, and even news about our own competitors."

Tougher on Salesman?

Another P.A. asked: "Are we getting tougher on salesman? No—but we are getting tougher on suppliers"—meaning of course that "P.A.'s want more reliable tools, longer lasting items, better quality raw materials, more service to back up products, and in-



X-RAY OF A P.A.—You can tell 1960 was a harrowing year for salesmen by the way the vendors' bible, 'American Salesman,' 355 Lexington Ave., New York, depicts the P.A. in this cartoon in its latest issue.

stant servicing whenever possible."

Complaints that purchasing executives are trying to push off inventory—carrying costs on suppliers by requiring them to hold quantities of ordered goods has upset many sales offices. Most are trying to adjust to it, just as they are admitting that the days of "six to eight week delivery times are gone forever." "Those days never will return," a sales manager for an Atlanta carton manufacturer said. "From now on, normal deliveries will be in the three-to-five weeks span."

Compliment and Warning

This same sales executive added the following compliment tempered with a warning: "Sure our salesmen have been knocked around a bit and are getting pressure to make price concessions and to promise some pretty unreasonable delivery dates. But we feel this is a perfectly natural

reaction on the part of purchasing agents. Purchasing men are not going to let this situation change without a lot of resistance especially after going through a year where prices were soft and inventories had to be kept down.

"But change it will—and soon as far as prices are concerned. By April the economy will have been strengthened to a point where prices again will be firm."

Admit to Pressure

Purchasing men, for the most part, freely admit that they are putting the pressure on suppliers to comply with most of the demands that have become sore points in many sales offices. These are: short orders, speedy (virtually instant, in some cases) deliveries, faster expediting, vendor carrying of buying inventories, and so on down the list.

But they justify these demands by saying that vendors must keep up with the times.

Small Orders Irk Aluminum Dealers

(Continued from page 1)

clerical costs per order and cutting deeply into our profit margin."

The same lament—small orders with higher costs—was sounded by distributors from all over the country. Two firms, Williams & Co. of Pittsburgh and Marsh Steel and Aluminum Co. of Kansas City, Mo., reported record order levels, but relatively low tonnage volume in recent months.

One New York executive told PURCHASING WEEK that distributors were reluctant to follow the lead of steel service centers in giving quantity discounts on combinations of small orders, because the saving in processing costs would not balance the lower price.

And Marvin B. Marsh, presi-

dent of Marsh Steel and Aluminum, noted that, "distributors will stick by the per-item pricing system that is traditional for aluminum products."

Despite strong resistance to the practice, however, quantity discounts for combinations of small orders are easy to get in some areas scattered around the country.

But aluminum distributors are optimistic that the small orders will give way to more normal volume buying by second quarter to midyear. "This short ordering is a sure sign that inventories are low," was a representative comment.

"Another sign is the terrific demand for service," added Marsh. "More and more of our orders are for extremely quick delivery."

This Week's

Purchasing Perspective

JAN. 30—
FEB. 5

(Continued from page 1)

was), if he's really any good, is also a good labor mediator."

The strike involved only some 600 harbor tug and ferryboat workers handling railroad harbor freight car movements—but it mushroomed when Maritime Union members began picketing New York Central operations as far west as Cleveland. In addition to shutting off rail travel for some 100,000 New York area commuters, shippers throughout the East, New England, and even into the Midwest suddenly had to hunt for other transportation, swamping trucklines with requests to get goods moved from vendors to customers.

You can still find patches of optimism in Pittsburgh, Cleveland, Chicago, and Detroit despite the continuing production setbacks in both steel and the auto industries.

Automakers, who still have not changed from their general practice or ordering a 30-day supply of steel to keep in inventory, still point hopefully to the latest University of Michigan consumer survey that indicated an upward trend in intentions to buy new cars this year. Used car sales, another traditional barometer of consumer health, have been reported moving along at firming prices.

Detroit also reports truck production turning upward, with about 270,000 units scheduled for first quarter production. Intense demand appears to be developing for the new compact models such as Ford's Econoline and Chevrolet's Corvair 95.

Even in Cleveland where there have been few real signs of upcoming spurts in general metalworking activity, spokesmen of representative groups evidence a fair measure of both long and short-term optimism.

In Chicago, where as in other steel centers mill operators have little to crow about, one veteran mill executive describes his situation this way: "A feeling that what with a new President, renewed confidence in the way things are going, and spring weather in the offing, things should get better by May or June."

Underlying business confidence also is reflected in a new National Industrial Conference Board query to nearly 200 manufacturing companies. A majority of the firms said they had been affected adversely by the current business slowdown, but almost three out of four believe the rate of incoming business can go nowhere but up from now on.

Trucking Firms Eye Rate Increases

(Continued from page 1)

any, and months to put any rate increases into effect.

Chicago area carriers indicated they were thinking along these lines:

• A rate increase, vaguely estimated in the neighborhood of 7%.

• Possible efforts to revamp or eliminate services with low profit potential, particularly on certain short hauls.

Key wage provisions in the contracts, due to take effect Feb. 1, vary by states in the 18-to-32¢ range. The first increase, 7¢/hr., takes effect Feb. 1. A cost of living escalator calls for a 1¢ adjustment for each 0.4 change in the Consumer Price Index, computed once a year starting in 1962.

The vital piggybacking issue was suspended for another year, but still hangs over truckers' heads. Management negotiators agreed to join the union in a special "study group" to work out a solution. But if none is reached by Feb. 1, 1962, truckers agreed to pay flat \$5 fees to the union for each truck trailer placed on a rail flatcar, barge, or airplane.

As for higher tariffs, operators were confident they would get them eventually. D. R. Ryan, general manager of the Central States Motor Freight Bureau, said he did not anticipate ICC

opposition to higher tariffs because "we can prove the need."

Guy Cooper, head of Cooper-Jarrett, Inc., estimated the contract cost to his company at about \$375,000 the first year; Spector - Midstates estimated \$600,000.

One faction within the Central States group already docked a 7% general increase, possibly anticipating the outcome of the contract negotiations. But action has been delayed pending a further look at the balance sheets.

Some truckers speculated about the possibility of eliminating some borderline freight services. "Maybe we could just not solicit certain types of non-compensatory business," said one. Another trucker added: "We might find that serving certain communities just isn't profitable." Still another comment touched on short hauls without return pay loads, a service wherein curtailment would affect smaller communities.

General conclusions: The Midwest settlement pattern will be a Hoffa goal in other negotiations throughout the country. And a trucking executive added ominously: "I can tell you one thing—the next time we sit down with Hoffa three years from now, there won't be nearly as many companies involved in the negotiations."

MoPac Names P.A. to New Vice Presidency

(Continued from page 1)
ruary, 1958 to take over as general purchasing agent, Hoffmeister had spent his entire career dealing with railroading's mechanical and engineering problems. He had joined MoPac in 1932 as a chemical engineering graduate, and his engineering work had given him a good knowledge of materials needed to run a railroad.

Added to that was a keen understanding of the role data processing would play in today's problem of tight inventory control. Thus Hoffmeister got the job of revamping MoPac's manual methods of purchasing and record keeping procedures.

Recoding

The first task tackled was re-listing, coding, and reclassifying some 60,000 items carried in some 400 MoPac master stock-books. By the time he finished he had compiled a simplified catalog condensed into eight loose-leaf binders which carried 56,500 "standard" products used regularly by the MoPac. These were programmed into an IBM Ramac (random access method of accounting control) put into operation July, 1959.

However, even without the Ramac, Hoffmeister realized an inventory reduction of \$500,000 just from a better stock catalog control system.

Under the new controls only those items carried as "standard" can be requisitioned by purchase order. Items not in stock are classified as "specials" and the ordering department now must pay for them immediately. "This eliminates a lot of inventory accumulation in itself," Hoffmeister said.

Carrying inventory for long periods of time costs money. The National Assn. of Purchasing Agents estimates the minimum cost at about 25% when such items as obsolescence, insurance, cost of borrowing, pilferage, etc., are added up.

\$1-Million Savings

At the rate the new MoPac purchasing control has saved \$1-million in the last three years. In that period inventories in the 12 railroad "stores" has declined from \$16.6-million at the close of 1957 to \$13.3-million at the close of 1960 with \$1.6-million of the latter being a canceled rail program. If this special rail inventory (a capital item) were not counted, the inventory for 1960 closed at \$12.2-million or a reduction of more than \$4-million.

Much of this has been made possible by the Ramac, which costs MoPac about \$4,000 a month in rental but saves about \$235,000 annually.

So sold is MoPac on these electronic wonders that an IBM 7070 is ready for installation next month, along with an IBM 1401.

"We feel the 7070 programs will start netting a profit of \$20,000 the first year and will achieve savings to \$554,000 by the third year," Hoffmeister said.

The EDP program no longer makes it necessary for departments to keep excessive stocks. Not only is there positive assurance from these controls that stocks will never be exhausted, but the machine can upon demand with uncanny accuracy

spot a surplus stock in a company store and set in motion transfer of the excess.

For example, Assistant Chief Mechanical Officer O. L. Hope found that six switch engines assigned to the San Antonio yards were of three different makes, necessitating three separate inventories of spare parts.

"The engines were reassigned so only one make is at San Antonio. This cut required inventory by one-third at that location," said Hoffmeister.

"Recently we took a close look at three classes of locomotive materials and had Ramac find out how items in the classifications had lain on the store shelves more than 15 months. To our amazement it added up to \$667,000," said Hoffmeister. "We have taken these materials and classified them as surplus because of their excessive shelf life due to low demand. They are being transferred to a small warehouse we have established at Little Rock, Ark., central point on our system, using personnel drawn from other stores. Hereafter future requirements will be checked against

these stocks before new purchase orders are issued."

Asked if the new inventory program had caused any serious shortages on the railroad, he replied: "No, not so far, and this has been achieved despite the fact that in several items we have actually programed stock-outs."

Hoffmeister says without the full support of the railroad's officers and close cooperation with Controller E. W. Runge, the success achieved to date would not have been possible. Considerable credit belongs to the successful programing of the computer by the methods analysis team selected from purchasing, stores and accounting departments."

A new policy of "local purchasing" in which general managers and certain storekeepers may spend up to \$200 by voucher check has also reduced inventory accumulation. All storekeepers and division superintendents have this authority, enabling MoPac to take advantage of discounts, save man-hours on purchase orders at headquarters, and improve community relations.

Compacts May Get Two-Ply Tires

(Continued from page 1)

mate that over 100,000 two-ply tires now are in use, with the car buyers not aware of their guinea pig role in the testing program. The automakers are relying on warranty adjustments to indicate the tires' performance. Tests by the tire companies themselves have been conducted over the past two years, with Goodyear alone racking up 14-million miles.

Improved riding qualities and indicated fuel economy are cited as the biggest advantages of the two-plys.

Some sources expect the new tires eventually to sell at lower prices, although initially they will probably be put on the market at the same retail prices as equivalent four-plys.

Design criteria of the two-plys call for equal or better strength than the four-plys. The cords are larger and stronger, with the result that about the same poundage of rayon (Tyrex) is used. It is the number of cords per inch, not the number

of plies alone, that counts, say manufacturers.

"Tire strength is directly related to the quality and weight of the cord used," E. F. Tomlinson, president of Goodrich's Tire Div., points out.

He explains that because the two-ply has a thinner side-wall and fewer plies to generate internal friction, it allows increased flexing without excessive heat build-up. This contributes to the softer ride.

Two additional advantages cited for two-plys: (1) cooler running at turnpike speeds, and (2) roughly 3/4 to 1-lb. less unsprung weight.

However, some industry sources raise the question of possible compromise between riding quality and stability—a matter that only increased use will answer.

Even though it's too early to tell for sure, most observers close to the tire industry say the odds are good that two-plys will be standard equipment on 1962 model compacts.

Late News in Brief

New Walkouts Threaten New York

New York—Federal mediators were working to avert two new strikes threatening the New York area. A walkout of tugboat and oil barge workers was slated for midnight Jan. 31 by United Marine Div. Local 333 of the National Maritime Union. A strike could affect docking of vessels and curtail movement of heating oil and building supplies to the city.

The New York Central Railroad faced a weekend walkout by conductors and brakeman over the number of conductors for sleeping cars. The new strike threat came as the Central resumed operations following settlement of a walkout of railroad tugboat crews in New York harbor.

Goodrich-Gulf to Build Polybutadiene Plant

Cleveland—Goodrich-Gulf Chemicals, Inc., said it will build a plant for production of Ameripol CB polybutadiene rubber at Institute, W. Va. The plant will be completed late this year. The company claimed tests indicate its new synthetic-natural is the only known polybutadiene rubber which can be used as a 100% replacement for rubber in heavy duty tire treads. It said tread life was up to twice that of natural rubber.

Price Boosted on Industrial Finishes

Louisville, Ky.—Jones-Dabney Co., a division of Devco & Reynolds Co., Inc., has notified customers of price increases averaging 3% on its industrial finishes. The increases followed a 3% hike by DuPont Co. in industrial finishes earlier this month.

Size of Containers Sparks Hot Debate

(Continued from page 1)

despite the tremendous strides being made in containerization for shipment of industrial products lack of standards is preventing containers from hitting their full potential as a common denominator of truck, rail, air cargo, and water shipping. The chief issue: What standards should be adopted to cut down on the wide range of containers now in use?

Truckers at the meeting were divided on the issue of 8 ft. x 8 ft. van containers proposed by a committee of the American Standards Assn. The American Trucking Assn. is going to push for legislation permitting 9-ft. wide trailers, which would open the door for 9 ft. x 9 ft. containers.

The Regular Common Carriers group in the ATA supports the 8x8 standard, but the ATA as a whole has refused to take a definite stand.

Shippers and carriers may not be willing to invest much in the 8x8 sizes until it becomes clear whether the states will permit

wider trucks, Carroll Boyce, editor of McGraw-Hill's *Fleet Owner*, told the institute. If the enabling legislation is passed, truckers may be reluctant to carry 8x8 containers when they could be hauling 9x9 containers with a 25% greater volume, Boyce added.

On the other hand, meeting chairman Fred Muller, Jr., predicted that the 8x8 size will be adopted generally because it represents the best solution to the problems of all the carriers.

"The specifications proposed by the ASA committee have been designed for optimum interchange of containers between all carriers—rail, boat and air, as well as trucks," said Muller, consulting engineer for Arthur D. Little, Inc.

"Maybe the truckers would rather carry a 9x9 container, but they will carry an 8x8 one if they are paid to," he stated.

The possibility of 9x9 containers also was discounted by Herbert H. Hall, chairman of the ASA committee, on the grounds that they would be too large for use in international trade.

For instance, many European tunnels and bridges would be unable to take a 9x9 container. On the other hand, 8x8 containers would not present much of a problem to European railways.

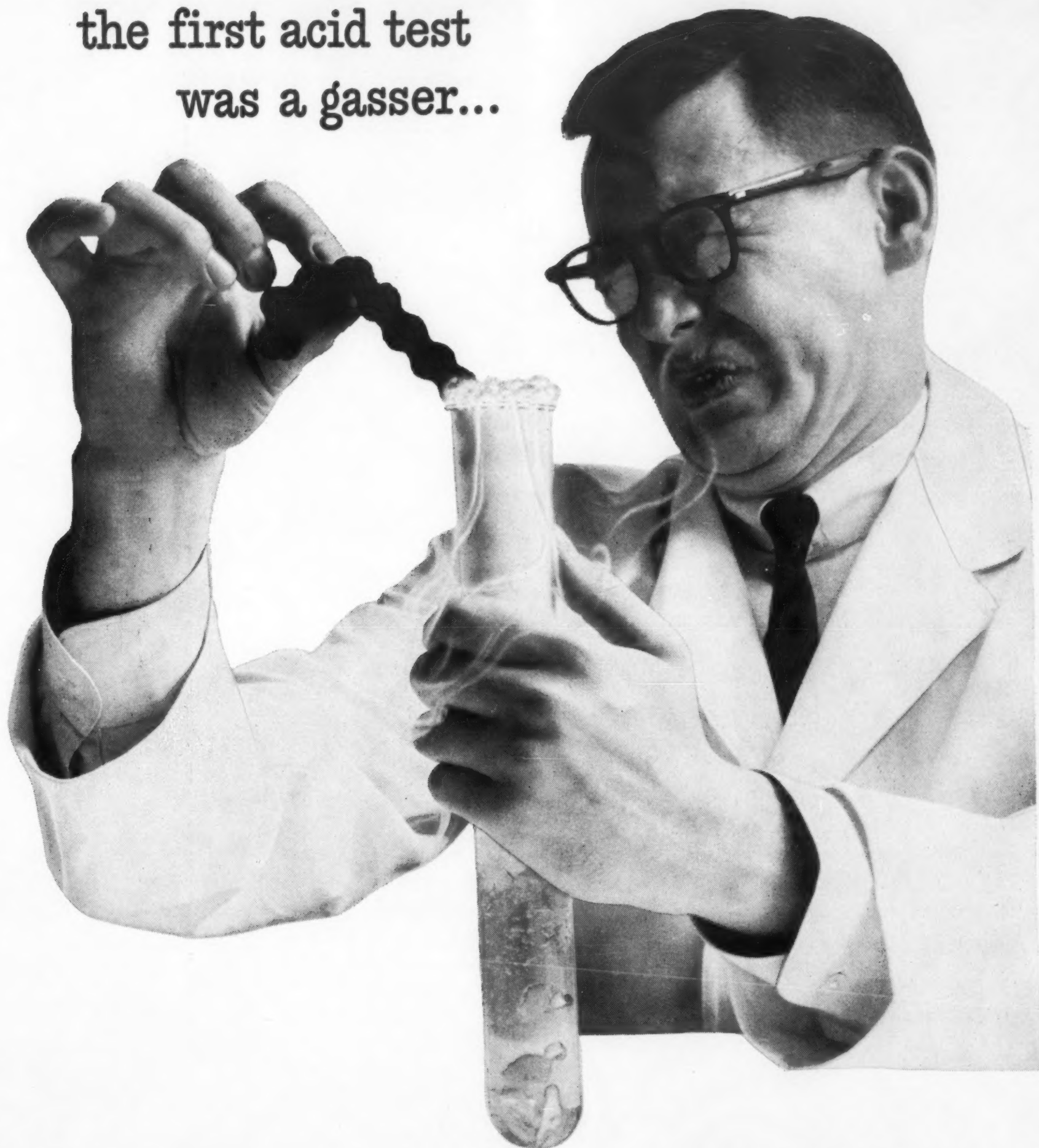
Hall's unit, known as the MH5 committee, has come up with specifications for 36 container sizes in three classifications—van, cargo and pallet. The proposed standards still must be approved by the ASA's Miscellaneous Committee and Standards Review Board before receiving final association endorsement.

Containers also were seen broadening the horizon for airlines by Gerard A. Craig, of Lockheed Aircraft Corp. Noting that the biggest obstacle to date in lowering air freight costs has been the expense of loading and unloading operations, Craig reported that in recent tests with containers, the number of man-hours needed to unload a plane has been reduced from 25 to 10.

Price Changes for Purchasing Agents

| Item & Company | Amount of Change | New Price | Reason |
|---|------------------|-----------|-------------------|
| INCREASES | | | |
| Tin salts, potassium stannate, lb..... | .004 | .78 | metal firmness |
| Sodium stannate, lb..... | .005 | .638 | metal firmness |
| Tin crystals, anhyd., lb..... | .006 | \$1.001 | metal firmness |
| Plywood sheathing, 1" CD, fob Northwest mills, msf.... | \$2.00 | \$114.00 | |
| Industrial finishes, Jones-Dabney..... | 3% | | incr. costs |
| Kerosene, #2 fuel oil, diesel, Esso, Southeast & Gulf Coast areas, gal..... | .003 | | high demand |
| Gasoline, Mobil, Upstate N. Y., dlr. tnkwgn., gal..... | .005-.008 | | price restoration |
| REDUCTIONS | | | |
| Vat dyes, khaki, 2G double paste, lb..... | .64 | \$1.95 | slow demand |
| 2G double paste, pwd., lb..... | .64 | \$2.25 | slow demand |
| Copper chloride, cupric, anhydrous, crlts., lb..... | .01 | .43 | copper cut |
| Dry, crystal, crlts., lb..... | .005 | .3775 | copper cut |
| Dihydrate, crlts., lb..... | .0025 | .2975 | copper cut |
| Cuprous, carlots, lb..... | .007 | .3855 | copper cut |
| Chrome, charge, low carbon ferro, 2 ferro-silicon grades, Union Carbide metals, lb..... | .02 to .025 | | |
| Arc welding equipment, machines, electrodes, supplies, Lincoln Electric..... | to 12% | | prod. econs. |

the first acid test
was a gasser...



The first acid test choked us up and confirmed that acid is tough on any roller chain.

But the final "acid" test—the user test for strength and wear life—told us you can't find a better roller chain than Rex. The reason, of course, is Rex quality materials, modern heat-treat techniques, and precision construction. Ask any user.

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REX IS BEST... IN THE USER TEST



A REPORT FROM ALCOA



To the purchasing agent who must decide about ALUMINUM WIRE

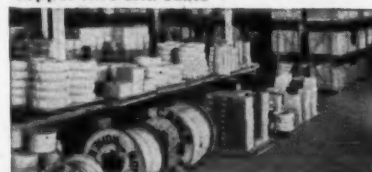
How one p.a. weighed his decision carefully, and cut costs drastically Yes, he literally *weighed* his decision. Discovered that aluminum wire weighs 30% to 50% less than copper. This coil, for example, weighed 18½ lbs., compared to 26 for the same length of copper wire with the same electrical capacity . . . Less weight means faster, easier handling and installation. **Immediate savings.** Compare first-price cost with that of equivalent copper wire, and you will quickly see how favorably Alcoa aluminum wire stacks up. When you consider *other* costs—handling, installing, pulling through conduit—you'll see how aluminum saves money all along the way. That's why it pays for a purchasing agent to *know what you need to know about buying wire*: **1.** Alcoa's aluminum wire can cost considerably less than copper. **2.** Availability is no problem. Rome Cable Division of Alcoa maintains adequate factory stocks and a nationwide network of distributors. **3.** You can get technical and engineering assistance by experts to help in converting from copper to aluminum. **When you decide** on your next purchase of wire, be sure you have all the facts at your finger-tips. Contact our nearest sales office. Rome Cable Division of Alcoa, Dept. 13-11, Rome, New York.

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Copper wire and cable



Aluminum wire and cable



Aluminum conduit



Aluminum bus conductor